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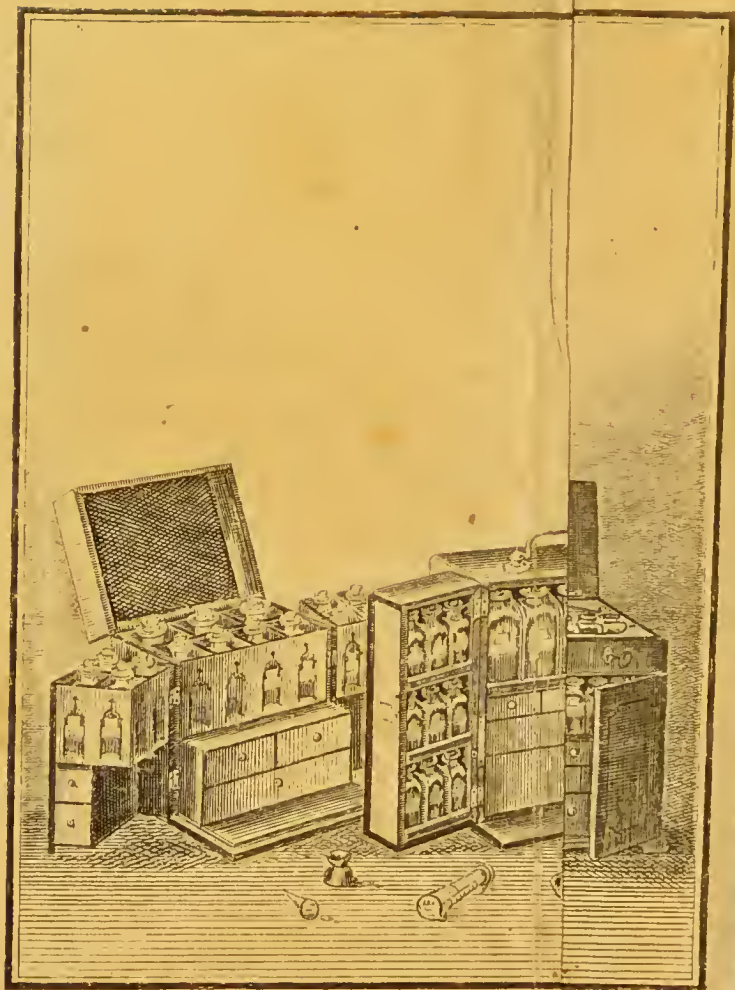
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By D. Cox.
Medical Leather.

NEW
MEDICAL COMPENDIUM,

For the Use of Families, &c.

CONSIDERABLY

ENLARGED AND IMPROVED,

BY D. COX, CHEMIST TO HIS MAJESTY.



Glocester :

PRINTED AT THE HERALD OFFICE ;

SOLD AT

The Royal Laboratory ;

BY LONGMAN, HURST, REES, AND ORME, LONDON ;

GILBERT AND HODGES, DUBLIN ;

AND OTHER BOOKSELLERS.

1808.



TO

SIR WALTER FARQUHAR, BART. M.D. F.R.S. &c.

THIS WORK

IS MOST RESPECTFULLY INSCRIBED,

AS A

TESTIMONY OF RESPECT AND ESTEEM,

By his former Assistant,

MUCH OBLIGED

AND MOST OBEDIENT SERVANT,

THE AUTHOR.

Royal Laboratory, Gloucester.

PREFACE
TO
THE LAST EDITION
OF
THE MEDICAL COMPENDIUM..

BY disease or accident, many valuable members of the community are lost, whose lives by the timely aid of medicine might have been prolonged.

Impressed with this truth, I have been for some time employed in selecting a form of medicines proper for sudden maladies, &c. and accompanied with plain and comprehensive directions, such as may enable the benevolent at a small expence to alleviate the afflictions of their distressed neighbours.

In fitting up these Dispensaries, or Medicine Chests, which I respectfully submit to

the Public, I mean to be guided by the authority of the new Pharmacopœia of the Royal College of Physicians of London; and I do assert, that all and every drug or medicine introduced, shall be of the first quality.

The very flattering sale of former editions of the Medical Compendium, and the encouragement I have met with in the different plans of my medicine chests, now considerably *improved*, lead me to hope that my humble efforts will, in this particular department of medicine, answer every intention I had in view when I first laid them before the public.

D. C.

INTRODUCTION.

ON presenting to the public this edition of his Medical Compendium, the author feels the propriety of making such introductory remarks as may prepare the reader with a clear conception of the design adopted.

The beginning of this work is exactly similar to the former edition, because like that, it is simply intended to meet the convenience of those who desire a guide to the more useful articles of a family chest of medicine. Hence in the execution of this portion of his undertaking, the author has abstained from the introduction of any thing which, by occasioning reference, might create delay and inconvenience, where it is

required that instruction be afforded in a manner the most ready and definite.

Having, as he humbly hopes, attained the above end, he proceeds to more elaborate matter, by entering upon a comprehensive explanation of the New Chemical Nomenclature,* especially those parts which have relation to pharmacy, or the art of compounding medicine. Such a treatise, it occurs to him, has long been a desideratum of moment. He trusts that his efforts on this occasion, have omitted nothing necessary to success. Of the advantages of his appendix, he speaks with some confidence. It brings under one point of view,

* Dr. Bostock, a most able physician, residing at Liverpool, has recently published a very ingenious pamphlet, forcibly pointing out the dangerous consequences of this nomenclature, more particularly in the hands of the old school. As great alarm may justly be taken at the varieties of terms used in prescribing the same kind of medicine. This uncertainty is removed by the mode of arrangement pursued in the present work, which places one prescription under the other, so that the reader may immediately see the exact formula of that medicine he wishes to take. There is so much ability, however, in the critique upon Dr. Bostock's book, by the editors of that well conducted work, the *London Medical Review*, that it is impossible, in fairness, to avoid making an extract:—"As to the danger of mistakes from a new nomenclature, we conceive that

the principal recipes for domestic purposes, as sanctioned by the three Colleges of the united kingdom: those, however, which could not so properly be otherwise disposed of, are inserted in different places in the body of the work, under the particular head to which they belong.

A glossary, too, is given, defining no other words but such as are abstruse, and carefully avoiding any that are indelicate.

Where the subject is particularly im-

no great apprehensions ought to be entertained. Blind routine is perhaps more dangerous than the temporary embarrassment alluded to; particularly as in the present ease every man would be upon his guard, and as the difficulty, after all, would be ultimately reduced to that of framing for the use of the older practitioners, a convenient vocabulary of synonymous terms. An objection is started by Dr. Bostock which applies to Great Britain with particular force; we mean the confusion of languages likely to arise from the different pharmaceutical terms used by the colleges of London and Edinburgh,* and by the students of the medical schools of either metropolis. But if the change of nomenclature should be thought desirable upon general grounds, might not this objection be removed by a resolution of the colleges to blend their pharmacopœias, and to establish, by mutual concessions, a common standard of nomenclature?"

* Dublin might also have been mentioned.

portant or interesting, copious annotations will frequently be found.

The author acknowledges with gratitude the eminent sources from whence have sprung his chief aid in this compilation. They are the fourth edition of Lewis's *Materia Medica* by Aikin, and the fourth likewise of Duncan's *Edinburgh Dispensatory*.

It has been the author's invariable endeavour, to compress his matter into the smallest possible compass, so as to avoid the odious imputation of *book-making*.

The liberty he has taken of introducing his own preparations, will, he trusts, obtain indulgence, inasmuch as they pretend to no qualities which will not be realized upon trial, and are only offered as humble *auxiliaries to medicine*; blending in a form at once neat and convenient, such articles as, when combined, may, like many other things of small account, contribute something to the comforts of life.

If PART I. or the explanation herein given of PHARMACY, &c. meet with a sale sufficient to defray the expences incurred

by the author, and to afford a reasonable encouragement to his endeavours, the second Part, *i. e.* Medicine and Surgery, or those branches of the latter which may be most readily and advantageously adopted into family use, will then be attempted: but here he would declare, that he has no specific medicine or nostrum of any kind, to obtrude on the world; his only intention being to collect the sentiments and practice of the most eminent professional men, divested of technical terms, and of those which might give offence to the ear of delicacy.

THE
MEDICAL COMPENDIUM.

PART I.

PHARMACY AND MEDICINE.

EMETIC TARTAR---OR, TARTARIZED ANTIMONY.

IN doses of one grain, and from that to four grains, dissolved in boiling water, it operates as an emetic, and sometimes as a cathartic. In smaller doses it excites nausea, and proves a powerful sudorific and expectorant. As an emetic it is chiefly given in the beginning of fevers, and febrile diseases, in chin or whooping cough; and generally whenever the stomach is to be emptied quickly. In the advanced stages of low fever, or in cases of great debility, its use is improper, and even sometimes fatal. As a diaphoretic, *i. e.* as intended to promote sweat, it is given in small doses, of an eighth, and from that to a quarter of a grain; and as an expectorant, in doses still smaller.

The only proper form for giving it is in solution, and as the intensity of its action on the body is liable to variation, from differences in the preparation, and in the constitution of the patient, it should almost always be given in divided doses, at short intervals, if vomiting is intended to be excited; and at longer intervals, if it is meant to act on the skin or lungs.

When given to children, it is proper in case of acidity in the stomach, which is prevalent in childhood, to join magnesia with the solution. This mixture, will not be disagreeable, and in many of their diseases is very efficacious.

Tartar emetic given in the smaller doses, and regularly continued twice a day for a considerable time, in such decoctions or other preparations of herbs as may be suitable to the complaint, is serviceable for most cutaneous diseases, and may occasionally be joined with small doses of calomel, or sweet mercury: the patient carefully abstaining from acid liquors or fruits at the time it is taken, and for some hours afterwards, so that no acid may be introduced while *these* mineral preparations are in the stomach.

Tartarized wine of antimony is prepared somewhat differently as directed by the London, Dublin, and Edinburgh Colleges; according to the two former, by dissolving emetic tartar in boiling water, and afterwards mixing it in Spanish white wine; according to the latter, by dissolving it in the wine only. There is also a material difference as to strength, in the proportions of each: the

tartarized antimonial wine of the Edinburgh College contains two grains of the emetic tartar in each ounce of the wine; while in the same quantity of that preparation, as directed by the Colleges of London and Dublin, four grains are contained in the ounce.

It is possible, that the emetic tartar, by being first dissolved in water, may, when it is mixed with the wine, occasion a part of that active medicine to precipitate, and so render the dose more uncertain. Emetic tartar, separately dissolved in wine or in water, continues to act without any difference as a medicine.

ANTIMONIAL WINE—Or, HUXHAM'S ANTIMONIAL WINE.

THE strength of this preparation will also vary according as the wine is more or less acid: hence the necessity of cautiously beginning with the smaller quantity.

DOSE:—From ten to forty drops, taken as an alterative medicine, two or three times a day, in any liquor adapted to the intention for which the wine is given.

If antimonial wine is taken to increase perspiration, and to remove coughs and colds, it may be joined with sweet spirit of nitre, and paregoric elixir, and taken in the saline draught, spermaceti mixture, almond emulsion, barley water, &c. diluting copiously with any mild softening liquid; or when taken as an antiscorbutic, or purifier

of the blood, and humours; or in complaints of the liver, &c. it may be administered in large quantities of such liquids as are proper for the particular disease: viz. the decoction of burdoc, ground-ivy, hayriffé, sarsaparilla, sassafras, juniper-berry, dandelion, &c. teas.*

Antimony is the basis of all the various antiscorbutics, fever drops, &c. that are advertised; the above preparation is not inferior to any in virtue, and more innocent than most of them; and as the antimony is minutely dissolved in the antimonial wine, that active mineral is in a state proper to enter into the smallest vessels of the body, and to be carried with the circulation of the blood to the most remote parts.

It is evident then, that its use must be regularly continued for a considerable time to eradicate long and inveterate maladies.

ANTIMONIAL POWDER—OR, JAMES'S FEVER POWDER.

THIS is supposed to be the same preparation with the celebrated nostrum of Dr. James, the composition of which was ascertained by Dr. Pearson of London, and to him the public are indebted for being relieved from a very extravagant charge for the above powder.†

* Extracts and Essences of these and many other valuable medicinal plants, &c. are prepared and sold at the ROYAL ELABORATORY, GLOCESTER.—See Appendix.

† See an account of Dr. Pearson's experiments on James's powder, read to the Royal Society.

It is given as an alterative and sudorific, from three to eight grains, repeated every third or fourth hour, and being insoluble in liquids, is best made up into a bolus, or taken in jelly; the person drinking freely of barley-water, veal or chicken broth luke-warm, or any weak diluting liquor, not acid. In large quantities, it operates as a purgative or emetic. Its principal use is in removing obstructions or the suppression of insensible perspiration, which so often produce fevers; and hence its great efficacy in putting a stop to the progress of severe fevers, or in preventing them from coming on after taking cold. Should the bowels be costive, it is most prudent to take a few grains of powder of rhubarb before it is administered. The antimonial powder in small quantities, when joined with purgative medicines, passes through the bowels without exciting sickness in the stomach, and is on that account mixed with the other ingredients that form the analeptic or bilious pills.

CALOMEL—Or, SWEET MERCURY.

THIS is one of the best and safest of the mercurial preparations that can be taken in a solid form. It is given to destroy worms, both in grown persons and children, and taken in the form of a bolus, at bed time: a brisk purgative medicine should succeed on the following morning, with the usual precautions which are observed on taking active medicines. A dose of the calomel, for an

adult person, is from six to ten grains. A child at one year old, may take one grain; at two years, two grains; and so on, increasing a grain for every year; if the child be strong, till it amount to four or five grains: for it is observable, that children (whose bowels abound with viscid matter) can in general bear active medicines better than full-grown persons. In very obstinate cases, some eminent physicians prescribe calomel, in doses of *six grains*, for a child of two years old: but this increased dose should not be given without medical directions.

Calomel is very proper for the following diseases of children; worms, rickets, and for those convulsions which arise from an accumulation of slime in the intestines, or obstructions in the mesenteric glands: it is advisable, on account of acidity, to join magnesia with it.

In bilious affections, and other complaints of the liver, &c. doses of a grain or two of calomel are often usefully administered with three or four grains of socotrine aloes, and castile soap, formed into a bolus; or taken with rhubarb powder, or castor oil, and continued in small doses, as the case may require; frequently taking large draughts of dandelion tea, manna dissolved in whey, or a solution of Rochelle salt, &c.

Calomel is much used as an alterative, and diaphoretic; for these purposes it is given in doses of half a grain or more, continued every night or morning, and accompanied with such medicines as determine its action to the skin—antimonial wine,

guaiacum, &c. the patient at the same time keeping moderately warm, and drinking plentifully of warm diluting (not acid) liquors.

In inflammations of the eye lids, &c. cutaneous inflammations, and eruptions, and other diseases of the blood and humours, it is proper to take calomel (in doses not exceeding a grain) for a considerable time, occasionally working it off with Rochelle salt and manna.

Calomel is generally proper in every case in which mercurials are used. By due management, it may be made to increase, in a remarkable manner, almost any of the secretions and excretions: hence it is joined occasionally with sudorific and diuretic medicines. One grain of calomel mixed with fine sugar, and snuffed up the nostrils, is recommended to purge the head; the same mixture blown into the eye, will sometimes remove specks from the cornea or fore part of the eye. Opium is sometimes combined with small doses of calomel, as in venereal cases, &c. to prevent it from acting as a purgative, or, as in the colic, to ease pain, and relax spasmodic stricture, that the calomel may operate on the bowels.

ROCHELLE SALT.

Rochelle salt is taken as a purge, from three quarters of an ounce to an ounce and a half, in water, thin gruel, veal broth, &c. adding, if agreeable, an ounce or more of manna.

Rochelle salt, introduced into medical practice by M. Seignette, an apothecary, at Rochelle, whose name it long bore, is milder in operation, and more agreeable to the taste, though not less efficacious, than Epsom, *i. e.* bitter purging salt, or Glaubers' salt. Its operation as an alterative medicine, is perhaps, not inferior to the Cheltenham, or any other purging mineral water; and its good effects in bilious and cutaneous diseases, especially when combined with small doses of emetic tartar, if regularly continued, so as to operate only as a gentle laxative, are probably not to be excelled or equalled by any of the more boasted preparations. The article advertised under the name of "Chalybeate Aperient, or Improved Cheltenham Salts," appears to be nothing more than Glauber's salt combined with some of the other purging salts, effloresced, and a few grains of the salt of steel or iron superadded.

The larger the quantity of liquid, in which saline medicines are dissolved, the more tasteless they are, and the more efficacious is their operation. An ounce of salts, taken in a tea-cup full of water, or any other liquid, generally produces thirst and sickness, and often vomiting and griping pains; when more diluted, these effects are not only removed, but the medicine has thereby an opportunity to diffuse itself, and to cool and cleanse the whole body.

A tasteless purging salt, invented by Dr. Pearson, is sometimes preferred, as being more pleasant than the Rochelle salt: its taste is similar to

table salt, and it may be used instead of that article, in veal broth, &c. Its dose and effect are the same as the Rochelle salt.

The Brazil salts, prepared in Yorkshire, are made by dissolving Rochelle salt in a strong infusion of liquorice root, and afterwards evaporating the moisture, by often stirring the mixture, to prevent the salt shooting into its usual chrystals: it has been fashionable as a pleasant purgative. The brackish taste of the purging salts, may be in some measure disguised by dissolving with them a small quantity of bay salt.

SALT OF TARTAR—OR, SALT OF WORMWOOD.

For preparing the saline neutral draught, take twenty, or twenty-five grains of either of the above fixed alkaline salts, and an equal quantity of refined sugar; dissolve them in a large spoonful of lemon juice, or distilled vinegar, to which add two or three spoonfuls of water, mint or barley water. To be taken for a draught.

Saline neutral draughts, are taken frequently in fevers; they are also used as vehicles for active medicines, rhubarb, bark, Dover's sweating powder, &c. they should carefully be neutralised, *i. e.* neither the acid nor alkaline should predominate, and as these salts will liquify, if placed in a damp situation, or not kept close corked, they may either be dried before they

are used, or the quantity of the salts increased four or five grains, in proportion to the weight of water imbibed.

Lemons and other acid fruit, varying in acidity, from the seasons, premature gathering, &c. will occasion an uncertainty in the quantity of juice necessary for the saline draught or mixture to neutralize the alkaline salt: the taste will best determine when it is neutral.

Neutral draughts are directed to be taken while in the act of fermentation, in malignant fevers, and putrid sore throats, and for continued sickness in the stomach.

The aërated salt of tartar, or salt of tartar combined with carbonic acid, lately introduced, and now generally used in saline neutral draughts and mixtures, is not subject to the inconvenience of dampness, which is above-mentioned: it is also, on account of its impregnation with fixed air, more proper than either the common salt of tartar or wormwood, for the fermenting draughts, taken in malignant fevers, &c. Carbonated soda, or the salt of tartar, is given in doses of from four or five grains, to fifteen or twenty, for the heartburn, and other acidities; and if assisted by proper dilution, operates as a powerful diuretic. These salts are also mixed with resinous medicines to promote their solution in the stomach, and added to decoctions, or other aqueous preparations in which resinous drugs are prescribed. Alkaline salts well diluted in milk, are the best liquids to

work off emetics, when given to discharge from the stomach mineral poison.—See *Treatment of Mineral Poison*.

ARTIFICIAL MINERAL WATERS.

Soda water, or water impregnated with fixed air, which is prepared by Schewppe, and M. Paul, of London, is an useful remedy in increased irritability of the stomach, as in advanced pregnancy: and is also one of the best anti-emetics which we possess. Water may also be powerfully impregnated with iron, in addition to the fixed air, so as to form an excellent substitute for the chalybeate mineral waters, by suspending a small quantity of iron wire in the water, while it is imbibing the carbonic acid gas. This preparation being at all times certain in strength, may on that account have an advantage over the natural mineral waters. For a description of the method of impregnating water artificially, so as to resemble the mineral waters, see *Chaptal's Chemistry*.

MANNA.

Manna is given as a purgative in doses of two ounces or more, dissolved in whey, &c. but is rarely employed alone for that purpose. From half an ounce to an ounce and a half of manna, is

frequently dissolved with the saline cathartics, purging mineral waters, or other purgatives, to sweeten them or render their operation more pleasant.

Manna, in doses of an ounce and upwards, proves gently laxative: it operates in general with great mildness, so as to be safely given in inflammatory or acute distempers, where stronger purgatives should not be used.

It is particularly proper in stomachic coughs, or those which have their origin in the stomach; contributing by its sweetness and unctuousity, to blunt as well as to expel the offending humours. It is often made into a linctus with equal quantities of oil of sweet almonds, and syrup of violets, and is equally useful to children and to grown persons.

POWDER OF RUSSIA—OR, TURKEY RHUBARB.

RHUBARB is a mild cathartic, operating without violence or irritation, and it may in general be given with safety, even to pregnant women and to children. In some people, however, it occasions severe griping. Besides its purgative quality, it is celebrated as an astringent, because it strengthens the tone of the stomach and intestines, and proves useful in diarrhæa and disorders proceeding from laxity. Rhubarb, in substance, operates more powerfully as a cathartic than in any of its preparations. Watery tinctures purge more than the spirituous ones; while the

latter contain in greater perfection the aromatic, astringent, and corroborating virtues of the rhubarb. The dose of powdered rhubarb, when intended as a purge, is from one to two scruples.

Spirituos Tincture of Rhubarb—Is taken in weakness of the stomach, indigestion, laxity of the intestines, diarrhæas, colic, and all similar complaints, occasioned by eating unripe fruits, drinking acid liquors, or by other causes. It is frequently made use of alone, by those who are accustomed to spirituous liquors; by others, it may be taken in a small wine glass of simple peppermint-water. In violent colics, half an ounce of castor oil (cold drawn), may be taken with an ounce of tincture of rhubarb; and if the pain be very acute, from five to twenty drops of laudanum may be joined with it, diluting with spearmint or peppermint tea, and avoiding all spirituous compounds.

Rhubarb Wine—This is a warm, cordial, laxative medicine: it is used chiefly in weakness of the stomach and bowels, and some kinds of loosenesses, to evacuate the offending matter, and strengthen the tone of the viscera. It may be given in doses of half a spoonful, and from that to three or four spoonfuls or more, according to the circumstances of the disorder, and the strength of the patient.

Stomachic, or, Compound Rhubarb Pills—They are intended for moderately warming and strength-

ening the stomach, and gently opening the bowels : they are sometimes joined with calomel, or other medicines, and given in bilious complaints, &c. during a course of the Cheltenham, or other mineral waters, or in sea-bathing.

DOSE :—Two to four pills, as their operation is required.

POWDER OF JALAP.

JALAP is a powerful and effectual cathartic medicine, usually administered to persons of strong constitutions, and in dropsical and other watery diseases.

DOSE :—From twenty to thirty grains, mixed with an equal quantity of cream of tartar, to which half an ounce of tincture of Senna (if required) may be added, and taken in any agreeable vehicle. Those of a delicate constitution may take from ten to twenty grains of this powder, joined with a like quantity of magnesia or rhubarb, or both, with a few grains of ginger powder. Should the additional operation of jalap be required, it may be promoted by taking afterwards a weak solution of any of the purging salts, or the infusion of senna, with salts and manna, lukewarm.

Tincture of Jalap.—Is sometimes taken by itself, in any agreeable liquor; but is more frequently added to the senna infusion, solution of purging salts, &c. in smaller quantities, to quicken their

operation. Dose:—From one to four tea-spoonsful. Jalap, or its tincture, is likewise mixed in syrup, and given to children; the syrup disguising in a great measure, its taste: it thus forms a useful and pleasant purgative.

Jalap, or Purging Pills—Dose:—Three or four at bedtime, or whenever required. This is a convenient and agreeable form of taking jalap: it is prevented from griping, by adding to the pills, a few drops of essential oil of mint, or any agreeable carminative or aromatic.

Calomel is sometimes mixed in small doses with these pills, to assist their operation.

COMPOUND POWDER OF SENNA.

THIS powder is formed of senna, cream of tartar, scammony, and ginger; the ginger being added, not only to divide, but to warm the medicine, and make it sit easy on the stomach. It is given as a strong cathartic, in doses of forty, and from that to eighty grains.

Tincture of Senna—Dose:—From one to four table spoonsful, occasionally mixed with the rhubarb tincture, to quicken the operation of the rhubarb: thus united, it becomes a warm comfortable purge, particularly for gouty persons, and such as have accustomed themselves to spirituous liquors: for others, not so accustomed,

this medicine is best diluted, or the senna infusion, or pills, taken in its stead. Such boastful articles as “ Drops of Life, or Daffy’s Elixir,” are not more efficacious than the senna tincture, they being a similar preparation rendered more pleasant to the taste, by the addition of liquorice root, aniseed, or some other carminative seed, and sweetened, the better to disguise the ill flavour of the raw spirit, with molasses.

The indiscriminate use of *such*, or any other *spirituous compound*, will, in time, weaken or destroy the vital powers, instead of prolonging life.

Infusion of Senna—Is prepared by pouring about half a pint of boiling water, upon from two to six drachms of senna leaves, in a tea-pot, and letting it stand about an hour. Senna decoction is very apt to occasion severe griping pains, and is not so efficacious as the infusion. If with the above infusion, a small quantity of bohea or lemon-peel be mixed, it will, in a great measure, disguise the ill taste of the senna; to which is generally added, one or more of the following medicines, in order to quicken its operation: manna, rhubarb, tincture of senna, Rochelle, or any other of the purgative salts. *Dose*:—From four to six table-spoonfuls, occasionally repeated.

Electuary of Senna, or Lenitive Electuary.—A useful and well known gentle laxative, taken to the quantity of a nutmeg or more, as the case may require.

Extract of Senna.—This article I introduced many years since in my Medicine Chests, made up into pills, under the title of “Mild Aperient Pills.”—
 DOSE:—From two to six; to which, when required, any of the more active preparations are added.

The form is more portable and proper for keeping than senna infusion or electuary, and is in many respects more suitable than spirituous medicines. Senna pills are a useful family medicine, and may occasionally be taken with the mineral waters and sea bathing.

CASTOR OIL—*Cold Drawn.*

THIS preparation of the castor nut, is the only one that ought to be introduced into the stomach. The oil obtained by boiling, parching, or by the pressure of heated irons, is of an inferior quality. Cold drawn castor oil is a mild lubricating purgative, producing its effect without griping, in cases where the more acrid purgatives are less necessary or safe. It acts so gently, that it may be given to new-born infants, and to pregnant and lying-in women; it has been found an useful remedy in vomiting, iliac-passion,* spasmodic colic, asthma, in complaints arising from the

* A most acute pain in the small intestines, tending to inflammation, and in which the peristaltic motion downwards of the bowels is inverted.

fumes of lead, in dysentery,* worms, &c. It is given to infants in the dose of one drachm, or more; to adults, from half an ounce to an ounce, and repeated at proper intervals. Castor oil, when taken in large quantities at a time, or when become rancid by keeping, or improperly prepared, excites nausea and vomiting. The London College has therefore directed the apothecary himself to express it.

Those who are averse from oil in its pure state, may take this medicine swimming on water, or peppermint water; or beat up with a part of the yolk of an egg, and mixed with fresh milk, with which it forms an agreeable emulsion.

FLOWERS, AND MILK OF SULPHUR.

EITHER of these articles may supply the place of the other: they are occasionally used externally and internally: for their external application, see *Cutaneous Eruptions*.

Sulphur has been employed in coughs, asthmas, and similar complaints of the breast and lungs, particularly in catarrhs of the chronic kind.† If

* This is a looseness or excretion of various matters, particularly blood, from the bowels: the disease is sometimes attended with a *tenesmus* or constant desire of going to stool, when there is no other discharge but a little blood, mucous or purulent matter.

† It has been observed, that the benefit derived from sulphur in these cases is principally, if not entirely, to be attributed to its operation as a gentle laxative.

taken in doses of ten grains, and so on to a drachm or more, it gently loosens the belly, and promotes perspiration: it seems to pass through the whole habit; and manifestly transpires through the skin: it is principally recommended against the piles, and in cutaneous diseases. It remarkably corrects or restrains the power of certain mineral substances of the more active kind: as arsenic, antimony, and mercury. Thus when antimony and mercury exceed their intended effect, from an increased dose, or other cause, sulphur is administered to abate their violence on the constitution.

Liver of sulphur, or brimstone united with the fixed alkaline salt, is of great efficacy in counter-acting mineral poison.—See *Treatment of Mineral Poison*.

Boiling water poured on flowers of sulphur in a close vessel, and suffered to stand well covered until fully impregnated, is spoken of as an effectual remedy for preventing returns of gout and rheumatism.

PURIFIED NITRE.

THIS salt is taken in the quantity of five, and from thence to twenty-five grains: in many cases the dose may be increased with great safety and more advantage. The only inconvenience is, that it will not always sit easy on the stomach; which may be obviated by proper dilution in

barley water, &c. Nitre gives great relief in stranguries and heat of urine, possessing a cooling as well as an aperient quality : it quenches thirst, and abates fever ; it considerably promotes urine, and sometimes gently loosens the belly ; but in cold phlegmatic habits, it seldom has the latter effect, though given in large doses.

Fluxes proceeding from too great acrimony of the bile, or inflammation of the intestines, are suppressed by it. In choleric and febrile complaints, it generally excites sweat ; but in malignant cases, where the pulse is low, and the strength lost, it restrains that salutary evacuation.

Nitre is generally used in disorders accompanied with inflammatory symptoms, whether chronical or acute ; and as a corrector of the inflammation or irritation produced by stimulating drugs.

Troches, or Tablets of Nitre ;*—Are taken for sore throats, and extreme thirst, and are an useful and pleasant medicine. Dose : one or two, gradually dissolved on the tongue ; or two or three tablets taken in any cooling liquid.

* Acidulated tablets or lozenges, are also prepared at the Gloucester Elaboratory ; with the concrete acid of tartar, or acid of sugar, and made odoriferous with the rose, &c. such pleasant articles, by removing thirst, are useful in public assemblies, &c. and may prevent the ill consequences that often happen from drinking cooling liquors when the body is over heated by great exertions, or any other cause.

CREAM OF TARTAR.

THE virtues of cream of tartar are those of a mild, cooling, aperient: it is used in dropsy, &c. Taken in doses of half an ounce to an ounce, it proves a gentle, though effectual purgative. It is mixed with other medicines, with sulphur, lenitive electuary, and sometimes castor oil and nitre, and made up into an electuary; which is often of service in the piles, when given in doses so as to keep the body cool and open.

Cream of tartar is employed in many other chronic complaints, and as a deobstruent, &c. in smaller doses, taken in solution, it often acts as a powerful diuretic.

SOLUBLE TARTAR—TARTARIZED KALI.

THIS preparation, formed of the acid of tartar, and fixed alkaline salt, is administered in the same quantity, and operates in the same manner, as cream of tartar. It has been particularly recommended as a purgative for maniacal and melancholy patients. It is an useful addition to the purgatives of the resinous kind, as it promotes their operation, and at the same time tends to correct their griping quality. It is totally, or partially, decomposed by all acids,* which absorb its alkaline salt, and precipitate the tartar.

* Dr. Lewis, Dr. Duncan, and other eminent writers, observe, 'that it is improper to prescribe, with soluble

MAGNESIA—*Calcined and Common.*

CALCINED magnesia is in esteem for relieving the heartburn, and preventing or removing the many disorders which children are thrown into from a redundance of acid humours in the first passages. It is preferred, on account of its laxative quality, to the testaceous and other absorbent earths; which, unless gentle purgatives are given occasionally to carry them off, are apt to lodge in the body, and occasion costiveness, very detrimental to infants.

DOSE: From thirty to sixty grains taken as a purge by an adult, to which are often added, ten or more grains of rhubarb, and in cases of flatulency, five of ginger.

Calcined magnesia, being deprived of its fixed air, is enabled to absorb and neutralize acidity or air which the stomach has generated; while common magnesia, which abounds with fixed air, would increase the complaint: common magnesia has the advantage of calcined, in nausea, and vomiting, on account of its fixed air; and is therefore properly given in these cases, with the saline fermenting draught, or in the acidulated mineral waters.

A large dose of magnesia, if the stomach contains tartar, tamarinds, or such like acid fruits; which is too often done in the extemporaneous practice of those physicians, who are fond of mixing different cathartics together, and know little of chemistry.'

tain no acid to dissolve it, neither purges, nor produces any sensible effect; a moderate one, if an acid be lodged there, or if acid liquors be taken after, produces several stools; whereas the common absorbents, (prepared chalk, &c.) in the same circumstances, instead of loosening, bind the belly.

Lozenges of Calcined Magnesia—are much used against heartburn, and other acidities. A *Stomachic Lozenge*, prepared with magnesia, colombo, and other tonics, I have found of great efficacy in many cases of acidity, indigestion, and flatulence.

IPECACUAN—OR, EMETIC POWDER.

EMETICS are best administered the first thing in the morning, and given in small quantities, frequently repeated until the operation be sufficient. By this management, they are allowed proper time to search the parts adjacent to the stomach, and they operate more mildly and beneficially than otherwise they would have done; without the risk, too, of bursting a blood vessel, by overstraining the patient.

An hour after the emetic has finished its operation, or as soon as the stomach is composed, give the following draught: take rhubarb powder ten grains; calcined magnesia, ten or fifteen grains;

spirit sal volatile, twenty drops; laudanum, ten, fifteen, or even twenty drops, if much relaxed; mix it in the saline draught, or in equal quantities of stomachic tincture and water, a table spoonful of each. This draught is intended to assist the operation of nature, by directing through its proper passages (the bowels) bile, which, after the action of the emetic is over, continues to flow into the stomach; the draught is also useful to cherish and invigorate the parts after the violence sustained by the operation of the emetic. Rhubarb is often joined with Ipecacuan, and, thus combined, acts as an emetic and purge, proper in stomachic and bilious complaints. The following extract is taken from Dr. Duncan's *Edinburgh New Dispensatory*:

“The primary effect of ipecacuan, is that of stimulating the stomach. If the dose be sufficiently large, it excites vomiting, by inverting the peristaltic motion of the stomach and duodenum; in a smaller dose, it only produces nausea, and operates by stool; and in still smaller doses, it gently stimulates the stomach, increases the appetite, and facilitates digestion. Its secondary effects depend on the sympathy of other parts with the stomach; and in this way only can we explain its action as an antispasmodic, diaphoretic, expectorant, and in checking hæmorrhagies. Its beneficial effects in some cases also seem to be owing to the general concussion given to the whole system during the action of vomiting.

Ipecacuan, properly administered, often proves serviceable.

1. In intermittent fevers.—It has frequently succeeded

in stopping these, when given about an hour before the fit was expected, and also when given so as to produce vomiting at the time of a fit, or at the end of the cold stage.

2. In continued fevers.—We have never seen more decidedly beneficial effects from the use of any medicine whatever, than from the exhibition of ipecacuan in the commencement of nervous fever. An emetic, succeeded by a diaphoretic regimen, when administered sufficiently early in this disease, very frequently cuts it short at once, and when it fails in this desirable object, it always has a beneficial influence on the progress of the fever.

3. In inflammatory diseases, rheumatism, bubo, swelled testicle.

4. In measles, small-pox, &c. when the eruption is disposed to recede.

5. In fluxes of blood, when given in nauseating doses.

6. In great discharges, especially in dysentery, so much so, that it was formerly esteemed a specific against that disease. But Cullen attributes its good effects in this instance, to its producing a steady determination of the peristaltic motion of the intestines downwards, when given in repeated small doses.

7. In many spasmodic diseases, in epilepsy; asthma; difficult respiration; chin-cough; chronic diarrhœa; hysteria; melancholia; and mania.

8. In subtumid diseases, or bad habits of body, as in some kinds of dropsy.

9. In cutaneous diseases; in jaundice.

10. In local diseases; in gutta serena; and for many causes of defect of appetite.

11. Lastly, in every instance when we wish to evacuate the stomach, as when it is overloaded with food, or when poison, especially opium, has been swallowed.

The use of ipecacuan, as an emetic is contra-indicated,

1. Where there is a disposition to hæmorrhagy.
2. Where there is an increased flow of blood towards the head.
3. In very irritable subjects.
4. In pregnant women, and persons afflicted with hernia.

Ipecacuan is exhibited

1. In substance ; in powder. Full vomiting will generally be produced in an adult by a scruple or half a drachm, and though less might answer the purpose, fortunately an over-dose is scarcely attended with any inconvenience, as the whole of it is vomited with the contents of the stomach as soon as it operates. The vomiting is promoted and facilitated by drinking copiously of warm watery fluids. On the contrary, when vomiting is not intended, liquids must be rather drunk sparingly, and the dose must be diminished to a grain or less. In such small doses it is conveniently combined with any proper substance, in the form of powder, pill, or lozenge.

2. In infusion. One drachm may be infused in four ounces of water, and taken in repeated doses till it operates.

3. Infused in wine.

Ipecacuan not only checks the narcotic effects of opium, and is therefore one of the best antidotes for its poison, but reciprocally the emetic powers of ipecacuan

are checked by the addition of opium, (as in Dover's powder,) and the combination operates by increasing the cuticular discharge.

Dover's Sudorific Powder, or Compound Powder of Ipecacuan.—The dose is from five to twenty grains: it is proper to avoid much drinking immediately after taking it, otherwise it is very apt to be rejected by vomiting before any other effects are produced. This powder is one of the most certain sudorifics, and is given in rheumatism, dropsy, and several other diseases, where it is often difficult by other means to produce a copious sweat.

Ipecacuan Wine.—The common dose is an ounce, more or less, according to the age and strength of the patient.

PERUVIAN BARK,

It was first introduced for the cure of intermittent fevers; and in these, when properly exhibited, it rarely fails of success. Practitioners, however, have differed with regard to the best mode of exhibition; some prefer giving it just before the fit, some during the fit, others immediately after it. Some, again, order it in the quantity of an ounce between the fits; the dose being the more frequent and larger according to the frequency of the fits; and this mode of exhibition, although it may perhaps sometimes lead

to the employment of more bark than is necessary, is considered, upon the whole, preferable, from being best suited to most stomachs. The requisite quantity is very different in other cases; and in many vernal intermittents it seems even hardly necessary.

It is now given, from the very commencement of the disease, without previous evacuations, which, with the delay of the bark, or under doses of it, by retarding the cure, often seem to induce abdominal inflammations, scirrhus, jaundice, hectic, dropsy, &c. symptoms formerly imputed to the premature or intemperate use of the bark, but which are best obviated by its early and liberal use. It is to be continued not only till the paroxysms cease, but till the natural appetite, strength, and complexion return. Its use is then to be gradually left off, and repeated at proper intervals, to secure against a relapse; to which, however unaccountable, there often seems to be a peculiar disposition; and especially when the wind blows from the east. But although most evacuants conjoined with the Peruvian bark in intermittents are rather prejudicial than otherwise, yet it is of advantage, previous to its use, to empty the alimentary canal, particularly the stomach; and on this account good effects are often obtained from premising an emetic.

Bark is a medicine which seems not only suited to both formed and latent intermittents, but to that state of fibre on which all rigidly periodical diseases seem to depend; as periodical pain, in-

inflammation, hæmorrhagy, spasm, cough, loss of external sense, &c.

It is now used by some in all continued fevers; at the same time, attention is paid to keep the bowels clean, and to promote when necessary, the evacuation of redundant bile, always, however, so as to weaken the patient as little as possible.

In confluent small-pox, it promotes languid eruption and suppuration, diminishes the fever through the whole course of it, and prevents or corrects putrescence and gangrene.

In gangrenous sore throats it is much used, as it is externally and internally in every species of gangrene.

In contagious dysentery, after due evacuation, it has been used, taken internally and by injection, with and without opium.

In all those hæmorrhagies called passive, and which it is allowed all hæmorrhagies are very apt to become, and likewise in other increased discharges, it is much used; and in certain undefined cases of hæmoptysis, or spitting of blood, some alledge that it is remarkably effectual when joined with an absorbent, prepared chalk, &c.

It is used for obviating the disposition to nervous and convulsive diseases: and is taken with sulphuric acid, in cases of phthisis, scrofula, ill-conditioned ulcers, rickets, scurvy, and in states of convalescence.

In these cases, notwithstanding the use of the acid, it is proper to conjoin it with a milk diet.

In dropsy, not depending on any particular local affection, it is often alternated or conjoined with diuretics or other evacnants, and by its early exhibition after the water is once drawn off, or even begins to be freely discharged, a fresh accumulation is prevented, and a radical cure obtained.

Mr. Pearson, of the Lock Hospital, praises very highly the powers of this remedy in different forms of the venereal disease; in reducing incipient bubo, in cleansing and healing ulcers of the tonsils, and in curing gangrenous ulcers from a venereal cause. But in all these cases, mercury must also be given to eradicate the venereal virus from the system.

Peruvian bark may be exhibited,

1. In substance.

The best form of exhibiting this valuable remedy, is in the state of a very fine powder, in doses of from ten grains to two drachms and upwards. It may either be diffused in water, wine, milk, decoction of liquorice, porter, fresh small-beer, or mixed with some viscid substance, as currant jelly. Its taste, which is disagreeable to many people, is best avoided by taking it immediately after it is mixed up; for by standing any time, it is communicated to the vehicle. In this respect, therefore, it is better for the patients to mix it up themselves, than to receive it from the apothecary already made up into a draught with some simple distilled water, or into an electuary with a syrup. A much more important ob-

jection to this form of giving Peruvian bark, is, that some stomachs will not bear it, from the oppression and even vomiting which in these cases it excites. This inconvenience may be generally obviated by the addition of some aromatic, and by giving it in small doses more frequently repeated.

2. In infusion.*

To those whose stomachs will not bear the powder, this is the best form of exhibiting Peruvian bark. Water, at a given temperature, seems capable of dissolving only a certain quantity, and therefore we are not able to increase the strength of an infusion, either by employing a larger quantity of the bark, or allowing them to remain longer in contact. One part of bark is sufficient to saturate sixteen of water, in the course of an hour or two. To accelerate the action of the water, it is usual to pour it boiling hot upon the bark, to cover it up, and allow it to cool slowly. After standing a sufficient length of time, the infusion is decanted off for use. The infusion in water, is however, liable to one very great objection, that it cannot be kept even a very short time without being decomposed and spoiled. Therefore, in some instances, the infusion is prepared with wine; and it fortunately happens, that very often, the use of the menstrum is as much indicated as that of the solvent.

* *Cold Infusion of Bark.*—Take of Peruvian bark in powder, one ounce; water, one pint; let it stand in a close vessel, for twenty four hours, frequently shaking it. Dose:—From two to six large spoonsful.

3. In tincture.*

* *Tincture of Peruvian Bark.*—Take of Peruvian bark, in coarse powder, six ounces; proof spirit of wine, or brandy, two pints; digest with a gentle heat for eight days, (occasionally shaking it,) and strain.

Compound, or Huxham's Tincture of Bark.—Take of Peruvian bark powdered, two ounces; exterior peel of seville oranges, dried, one ounce and a half; Virginian snake root, bruised, three drachms; saffron, one drachm; cochineal, powdered, two scruples; proof spirit, twenty ounces; digest for fourteen days and strain. The directions of the Dublin College, are to use half an ounce only of orange peel, to omit the cochineal, and increase the spirit from twenty to thirty-two ounces, or two pounds. Dose of the simple or compound tincture, is from a teaspoonful, to two large spoonful. [It is much to be feared that these and other bitter and tonic tinctures, as they are called, are with some only an apology for dram-drinking, or that this pernicious habit is often brought on by such medicines being indiscriminately taken.]

Volatile Tincture of Peruvian Bark.—Take of bark in powder, four ounces; spirit of sal ammoniac, (sal volatile) two pints; digest without heat, in a bottle close stopped; and afterwards strain the tincture.

Dose:—From twenty to eighty drops.

This is not to be recommended as a judicious preparation; for the nature of the menstruum is so stimulating that little effect can be expected from any portion of the bark it is capable of dissolving. A more useful tincture may be obtained by means of the dulcified spirit of sal ammoniac, and is proper in such cases where a large quantity of the bark is not required, as at the close of the cure of intermittents, in weakness of digestion, attended with a cold sensation at the stomach, with some fluxes, particularly that from the uterus, where the circulation is languid, the fibres relaxed, and where there is a periodical return of slight feverish complaints.

Dose:—A teaspoonful, five or six times a day.

The great activity of the menstruum in this preparation, prevents the bark from being given in sufficiently large doses to exert its peculiar virtues. It is, however, a powerful stimulant.

4. In decoction.*

Boiling water is capable of dissolving a much larger proportion of the soluble parts of Peruvian bark than cold or tepid water, but the solvent powers even of boiling water have their limits, and by protracting the decoction, the strength is not increased, but rather by diminishing the quantity of the water, we lessen the quantity of matter dissolved, by dissipating some of the more volatile parts, and precipitating the resinous ones. The decoction made agreeably to this formula, presents us with an easy means of immediately obtaining an active preparation of bark, and with one of greater strength than a cold or even a warm infusion, provided it be drunk while tepid, and before it forms any deposition, or if the precipitate be diffused by agitation, after it is formed. As the precipitate contains no woody fibre, or other inert matter, it is extremely probable that in very small doses it would prove, if dried, a very powerful preparation of Peruvian bark.

5. In extract.

In this preparation we expect to possess the virtues of Peruvian bark in a very concentrated

* *Decoction of Peruvian Bark.*—Take of Peruvian bark, powdered, one ounce; distilled water, one pint and three ounces; boil for ten minutes in a covered vessel, and strain the liquor while hot. Dose:—From two to four large spoonfuls.

state. The principal objections to its use are its great expence, and the decomposition and destruction of the active constituents of the bark during the preparation, when not properly conducted. It is convenient for the formation of pills and boluses, but we would always prefer a fresh infusion or decoction to any mixture in which the extract is re-dissolved.

Externally, Peruvian bark is used in substance, as an application to ill-conditioned callous, or gangrenous ulcers.

In the form of clyster, it may be given in substance, decoction, or extract. The powder is used as a tooth powder for spongy and bleeding gums, and the decoction is an excellent astringent gargle or wash.

To increase the power of Peruvian bark, or to direct its efficacy to a particular purpose, or to correct some inconveniences occasionally produced by it, it is frequently combined with other remedies. When it produces vomiting, carbonic acid* forms a useful addition; when it purges, opium; when it oppresses the stomach, aromatics; and when it induces costiveness, rhubarb. It may be also combined with other vegetable astringent or bitter remedies, without impairing its powers. But we are afraid that many additions are made, chiefly saline substances, of which the effects are not at all understood. Sulphuric acid,

* The acidulated waters, or the saline effervescing draught.

alum, sal ammoniac, salt of tartar, tartar emetic, iron, lime water, &c. have been frequently prescribed with it; but we know that in many of these mixtures, decomposition occurs, which renders the whole either inactive, or completely deceives us with regard to the expected effects.

Yellow Peruvian Bark.—This kind of bark has only been introduced since 1790, and we are still uncertain, both with regard to the tree which produces it, and the place of its growth. It consists of pieces about six inches in length, thicker, and less rolled up than the common bark. Its internal surface is of a deeper red. It sometimes wants the epidermis, which is often as thick as the bark itself. It is lighter and more friable than the former variety; its fracture is fibrous; and when reduced to powder, its colour is paler. Its taste is much more bitter, astringent, and stronger, but its smell is weaker. Its decoction when hot is redder, but when cold, paler. Its solutions strike a deeper colour with salt of iron or steel. It contains more bitter extractive, and more tannin and gallic acid, than either of the others, but less gum than the common, and less resin than the red. It also produces the same effects in much smaller doses. The epidermis should always be removed before it is powdered.

Red Peruvian bark occurs generally in much larger, thicker, flatter pieces, but sometimes also in the form of quills. It is heavy, firm, sound, and dry; friable between the teeth; does not

separate into fibres ; and breaks, not shivery, but short, close, and smooth. It has three layers ; the outer is thin, rugged, of a reddish brown colour, but frequently covered with mossy matter ; the middle is thicker, more compact, darker coloured, very resinous, brittle, and yields first to the pestle the inmost is more woody, fibrous, and of a brighter red. Its powder is reddish, like that of Armenian bole.

Its astringency and bitterness are more intense, and it contains more resin than the pale bark. It also produces its effects in smaller doses. It is said to be more frequently adulterated.

CASCARILLA BARK.

THIS aromatic bark was formerly much employed in the cure of intermittent fevers, instead of Peruvian bark, to which it is much inferior in efficacy.

It is, however, in the diarrhæ of acute fevers, and in intermittents, often joined to the Peruvian bark, and is by many preferred to it, as being less subject to some inconveniencies, which the other by its greater astringency, is apt to produce. Cascarilla was successfully employed in an epidemic fever, which raged in some parts of Norway in 1694 and 1695 : this disease, which at first had the appearance of an ordinary intermittent, at length was accompanied with eruptions on the skin. The common sudorifics, &c. were found

ineffectual: but the powder or extract of this bark, proved successful: dysenteries succeeding the fever were removed by the same medicine. During its use, the patient generally perspired plentifully, without loss of strength, or other inconvenience: the belly was likewise kept open; those who did not perspire, had three or four stools a day; where the menstrual or hæmorrhoidal fluxes were suppressed at the beginning of the disorder, they generally, upon the use of this medicine, re-appeared.

Among the Germans, cascarilla bark is in great esteem, and frequently employed with good success, as a warm stomachic and corroborant; and given in flatulent colics, internal hæmorrhages, dysenteries, and other like disorders. The gentlemen of the French academy, found this bark of excellent service in an epidemic dysentery in the year 1719; in which ipecacuana proved ineffectual: this last medicine left a lowness and weakness of stomach, which continued for a long time, whilst cascarilla soon raised the strength, and promoted appetite. Among us, the use of this bark is not yet so general as it seems to deserve: infusions of it are sometimes directed for promoting expectoration. Its virtues are partially extracted by water, and totally by rectified spirit; but it is most effectual when given in substance. Dose:—From a scruple to a drachm; taken in fine powder, in any agreeable vehicle. The doses of the infusion, tincture and extract of cascarilla, are similar to that of the Peruvian bark.

COLOMBA.

THE Colomba root has long been a medicine in repute among the natives of the countries which produce it, in disorders of the stomach and bowels. They carry it about with them, and take it, sliced or scraped, in Madeira wine. Our practitioners in the East Indies, adopted the use of it from them; and frequently found it of great service in the cholera morbus, so common and fatal in those hot climates. It was observed to stop the violent vomiting in this complaint, more speedily and effectually than any other remedy; an effect attributed to its property of correcting the putrid disposition of the bile. It was, however, little known or regarded in this country, till Dr. Percival, in his "Essays, Medical and Experimental," Vol. II. published observations and experiments on this root, with cases of its efficacy in various diseases depending on the state of the bile; as the bilious colic, bilious fevers, diarrhœas, habitual vomitings, &c. And, joined with vitriolated kali, in acute cases of the bilious kind. The experience of other practitioners has confirmed its utility in these cases. It is also considered as very useful in cases of indigestion. The dose of the powder usually employed has been from one to two scruples, three or four times a day. A tincture of Colomba, in the proportion of two ounces and a half of the root to a quart of proof-spirit, is directed by the London College.

QUASSY; THE WOOD, BARK, AND ROOT.

It may be given in all cases where bitters are proper. It has been exhibited in epidemic, intermittent, and remittent fevers; against bilious complaints, and for the suppression of vomitings; in loss of tone, want of appetite, and other stomachic affections; in dropsies, gout, cachexy, hypocondriac diseases, &c. It can scarcely be reduced to a sufficiently fine powder, to be given in substance, and is therefore given in the form of infusion, decoction, or extract.

A drachm of the rasped root, &c., may be macerated in a pint of cold water for twenty-four hours, or in boiling water for an hour; and from two to eight spoonful taken several times a day. The watery extract, which is said to be most in use at Surinam, is conveniently given in the form of pills, and on account of the intense bitterness of the drug, is preferable for delicate stomachs. Quassy has no sensible odour, but is one of the most intense, durable, pure bitters known: it is said to be less antiseptic than Peruvian bark; but like colomba, another pure bitter, it preserves bile longer from putrefaction.

It is much used in this country to give bitterness to malt liquors, though it subjects those brewers who employ it, to a very heavy penalty.

MYRRH.

THIS gum-resin is a heating, stimulating medicine; it frequently occasions a mild diaphoresis,

and promotes the fluid secretions in general. Hence it proves serviceable in cachetic diseases, or subtumid habits of body arising from inactivity; and is supposed to act, especially upon the uterine system, and to resist putrefaction. It is given in substance, in the form of powder, or made up into pills, in doses of ten to sixty grains, and is thought to be advantageously united with a proportion of nitre, cream of tartar, or some other cooling salt. A compound powder of myrrh, formed of dried rue, savin, and Russian castor, is made use of in either of the above forms, and in the same dose for these complaints. Myrrh is also combined with aloes, the fœtid gums, and is an ingredient in the compound rhubarb pills. Its tinctures are, a simple tincture, taken internally in the above cases, in doses of from fifteen drops to forty or more; though it is more commonly used externally, applied to the gums, for cleansing foul ulcers, and promoting the exfoliation of carious bones: and a tincture of myrrh, with aloes and saffron, commonly called elixir proprietatis,—this medicine is highly recommended as a warm stimulant and aperient. It strengthens the stomach, evacuates the intestinal canal, and promotes the natural secretions in general. DOSE :—The same as the simple tincture of myrrh.

Beaume de Vie; or Balm of Life, as it is pompously called, is thus made:—take of bruised myrrh, socotorine aloes, Russia rhubarb, English saffron, and liquorice, each four drachms, salt of

tartar, two drachms. Boil the above in one quart of water to a pint and a half; then strain, and add to the liquor when cool, an equal quantity of French brandy, or compound tincture of cardamom, (stomachic tincture,) or the senna tincture, as required. The saffron and liquorice should not be added until near the end of the boiling.

ALOES.

ALOES is a stimulating bitter cathartic: if given in so large a dose as to purge effectually, it often occasions an irritation about the anus, and sometimes a discharge of blood. Small doses of it frequently repeated, not only cleanse the primæ viæ, but likewise warm the habit, quicken the circulation, and promote the uterine and hæmorrhoidal fluxes. This medicine is particularly serviceable in habitual costiveness, to persons of a phlegmatic temperament and sedentary life, and where the stomach is oppressed and weakened: in dry bilious habits, aloes proves injurious, immoderately heating the body and inflaming the bowels.

It is, on account of its bitterness, supposed to kill worms, either taken internally, or applied in plasters to the navel. It is also celebrated for restraining external hæmorrhages, and cleansing and healing wounds and ulcers. The Barbadoes or hepatic aloes, is most resinous and serviceable in external applications; the socotorine aloes contain more gummy matter than the hepatic, and

hence is found to purge more, and with greater irritation. Aloes are made use of in many official preparations, especially different pills and tinctures, and according to the peculiar purposes for which they are intended, sometimes the hepatic, and sometimes the socotorine aloes are the most proper.

Powder of Aloes, with Canella Bark.—This composition has long been known under the title of *Hiera Picra*; it is an useful aloetic purgative, but is best taken made up into pills, or in an electuary; it was formerly the basis of a tincture distinguished by the appellation of *Sacred Tincture*. **DOSE** of this powder, is from ten grains to a scruple.

Powder of Aloes with Iron.—It consists of nearly the same articles which formerly entered the *Ecphratic*, or *Deobstruent Pills*, and is perhaps best employed when brought to the form of pills by means of syrups, than in powder. It is principally used in cases of obstructed menstruation. **DOSE**:—The same as the above.

Powder of Aloes with Guaiacum.—This is an useful purgative, and when taken only in small doses, its chief effect is that of warming the habit, and promoting perspiration. It is more frequently employed in the form of pills, made up with balsam of Peru, which constitutes the aromatic pills; they are also an useful stomachic, &c. and highly proper for gouty persons. **DOSE**:—From ten grains to a scruple.

Aloetic Pills, or *Compound Pills of Aloes*, are given in jaundice, and are well suited for the diseases above mentioned: they are seldom used for producing full purging; but if this be required, a scruple or half a drachm of the mass may be made into pills of a moderate size for one dose.

GUAIACUM; ITS WOOD, BARK, AND RESIN.

Its general virtues are those of a warm stimulating medicine: it strengthens the stomach and other viscera, and remarkably promotes the urine and cuticular discharges; hence in cutaneous defecations, and other disorders proceeding from obstructions of the excretory glands, it is evidently useful. Taken internally, it commonly excites a sense of warmth in the stomach, a dryness of the mouth, with thirst. It increases the heat of the body, and quickens the circulation. If the patient be kept warm, it produces a diaphoresis; if exposed freely to the air, an increased flow of urine. In larger doses it is purgative. Guaiacum is sometimes joined (as in the acute rheumatism, attended with fever) with nitre, and the diuretic salt, or their preparations. The Rochelle, or any other of the purgative salts, when the bowels are required to be kept open, may be advantageously taken with the guaiacum in the acute rheumatism, &c.

A decoction of the wood and bark * has been said to cure the venereal disease; and in this country it is given with sarsaparilla, sassafras, mezereon, and liquorice; as an adjuvant to mercury. The above are the ingredients which make the once much celebrated Lisbon diet-drink.

Resin of guaiacum† dissolved in rum, or when finely pulverised, and made in the form of an emulsion, by means of mucilage, or yolk of egg, in barley water, &c.; or into an electuary or pills, with syrup, or any other convenient and proper

* Guaiacum, in certain venereal symptoms, as in foul indolent ulcers, and a thickened state of the ligaments, or periosteum (covering of the bones,) remaining after the body is reduced by a mercurial course, is a valuable medicine; it will also suspend the progress of some of the secondary symptoms, but it is totally incapable of eradicating the disease. It is for these purposes, proper to add to it the Peruvian bark and opium; and occasionally in small doses, calomel, and sulphur of antimony. These medicines are equally proper in the ozæna, or venereal ulcer affecting the inside of the nose, (with or without the corruption of the bones or gristles,) and scrofulous affections of the membranes and ligaments.

† The solution in the stomach of this resin is greatly assisted by means of Castile or any other pure soap or fixed alealine salt, and its virtues as a stomachic medicine, and in gouty cases, &c. promoted by adding to it the aromatic powder, and balsam of Peru. Various other active preparations are separately or conjointly made use of with the resin of guaiacum,—viz. the antimonial powder, calomel, golden sulphur of antimony, camphor, opium, &c. and are combined with it in different proportions, according to the various purposes which are meant to be produced.

substance; is taken in doses of fifteen, and from that to forty grains in the day, as the case may require; dividing the quantity meant to be taken, into equal doses, and giving it at regular distances of time; as from three to six hours a part.

Volatile Tincture of Guaiacum.—It is administered from one to four tea-spoonsful for a dose, mixed at the time of taking, in any agreeable liquid luke-warm. It is much employed in the chronic rheumatism, and in the gout, and is usefully combined with laudanum.

AMMONIACUM.

THIS stimulating gum resin proves, on many occasions, a valuable antispasmodic deobstruent or expectorant, of considerable service in some kinds of asthmas, where the lungs are oppressed by viscid phlegm. In large doses it purges gently, excites perspiration, and increases the flow of urine. It is used with advantage in dropsical diseases, to augment the discharge of urine, and to support the salivation in small pox. It is also an useful deobstruent; and is frequently prescribed for removing obstructions of the abdominal viscera, and in hysterical disorders occasioned by a deficiency of the menstrual evacuations. In long and obstinate colics, proceeding from viscid matter lodged in the intestines, gum ammoniacum has produced happy effects, after purges and the com-

mon carminatives had been used in vain. Externally applied, it is supposed to soften and ripen hard tumors, and is made with quicksilver and henlock, into the form of a plaster. A plaster made of this gum and squill-vinegar, is recommended in white swellings. A dilute mixture of it is rubbed on the parts, which are also fumigated with smoke of juniper berries. A solution of it in vinegar has been recommended by some for resolving even scirrhous swellings. It is exhibited internally, in the emulsion of spermaceti, &c.; and dissolved in vinegar, is given along with vinegar of squills, assafœtida, &c. It is often taken made into pills with bitter extracts, assafœtida, myrrh, and gamboge. The gums ammoniacum, myrrh, and gamboge, with the antimonial powder, is the composition which form *James's Analeptic, or Bilious Pills*.

The dose of ammoniacum, is from fifteen to thirty grains.

SQUILL; OR, SEA ONION.—*The Root.*

It powerfully stimulates, and consequently promotes expectoration, urine, and if the patient be kept warm, sweat: if the dose be considerable, it proves emetic, and sometimes purgative. Its principal use is where the primæ viæ abounds with mucous matter, and the lungs are oppressed by phlegm. It is given along with nitre in dropsical swellings, and in diseases of the kid-

nies. **Dose:**—From four to ten grains of the powder of the dried root, mixed with a double quantity of nitre. In dropsy, dried squills are often combined with mercury. The most commodious form for the taking squills, unless when designed as an emetic, is that of a bolus or pill: the officinal preparations of it are an oxymel, a syrup, a vinegar, a tincture, and pills.

GAMBOGE.

GAMBOGE has been used in dropsy with cream of tartar or jalap, or both, to quicken their operation. It is also recommended by some to the extent of fifteen grains, with an equal quantity of salt of tartar, in cases of the tape-worm.

This dose is ordered in the morning; and if the worm is not expelled in two or three hours, it is repeated even to the third time, with safety and efficacy. It is asserted, that it has been given to this extent even in delicate habits. This is said to be the remedy alluded to by Baron Van Swieten, which was employed by Dr Herrensward, and with him proved so successful.—See *Edinburgh New Dispensatory*.

Gamboge evacuates powerfully, both upwards and downwards; its general dose is from two to four grains, without its proving at all emetic; that from four to eight grains, both vomit and purge without violence; its operation is soon over, and if given in a liquid form, and sufficiently di-

luted, it does not need any corrector; in the form of a bolus or pill, it is most apt to prove emetic, but very rarely has this effect if joined along with calomel. It is nevertheless necessary to be cautious in its use where the patient cannot easily bear vomiting.

BLACK HELLEBORE ROOT,

IN doses of from ten grains to half a drachm, proves a very strong, though not very violent cathartic, useful in mania, and where the stronger cathartics are required. It is, however, oftner exhibited in small doses, in the forms of tincture or extract, and is a powerful attenuant and deobstruent. It is found particularly serviceable against obstinate suppressions of the menstrual purgations, in plethoric habits, and sanguine constitutions, where chalybeates are ineffectual or injurious.

ASAFÆTIDA; THE GUM-RESIN,

Is a most valuable remedy; it acts as a stimulant, antispasmodic, expectorant, &c. and is used against worms, hysteric, and hypocondriac affections, and for different kinds of nervous complaints. It is likewise of considerable efficacy in flatulent colics: it promotes all the fluid secretions in either sex. It is administered for difficulty of breathing, and in the croup. In substance, in the

form of pills; in doses of from five to twenty grains, either alone, or combined with bitter extracts or purgatives. It is also taken in a solution of some simple distilled water, or dissolved in rectified or volatile spirits; and is given in the form of clyster, to the extent of about two drachms. Asafœtida is also applied with galbanum, &c. in the form of plaister to the navel, or over the whole abdomen, in hysteric cases; and sometimes with good effect, but probably more from its giving an additional degree of heat to the part, than any influence derived from the fœtid gums.

GALBANUM,

AGREES in virtue with gum ammoniacum; but is generally accounted less efficacious in asthmas, and more so in hysterical complaints. A tincture of galbanum is directed to be prepared by the London College, and given in doses of one, and from that to three tea-spoonsful; it is also administered in the forms of emulsion and pills, and is an ingredient in the gum pills. Applied externally, it is supposed to resolve and discuss tumours, and to promote suppuration.

SAGAPENUM, AND OPOPONAX.

IN medical virtues these two gums hold a middle rank between asafœtida and gum galbanum; they also are employed in the gum pills.

CAMPHOR,

Is looked upon as one of the principal diaphoretics and antiseptics, and as possessing some degree of an anodyne or antispasmodic power. Taken in any considerable quantity, it generally produces very uneasy sensations about the stomach and heart, and often in the remoter parts ; though it does not heat the body nearly so much as might be expected from its taste. In excessive doses it causes faintings, anxiety, retchings, convulsions, and delirium. The violent effects of camphor are best counteracted by opium. In a morbid state of the body, it allays inordinate action. When the pulse is hard and contracted, it renders it fuller and softer. It removes spasms, and flitting pains arising from spasms ; and in delirium, when opium fails of procuring sleep, camphor will often succeed. It is also said to correct the bad effects of opium, mezereon, cantharides, and the drastic purgatives and diuretics. The most general indication for the use of camphor, is the languor or oppression of the *vis vitæ*. It may therefore be given with advantage in all febrile diseases of the nervous kind, especially when attended with delirium ; in inflammations with nervous fever, as in some cases of inflammation of the lungs and rheumatism ; in eruptive diseases, to favour the eruption, or to bring it back to the skin, if from any cause it has suddenly receded, as in small-pox, measles, &c. ; in many spasmodic

diseases, especially mania, melancholy, epilepsy, hysterics, St. Vitus's dance, hiccough, &c. ; in indolent local inflammations, not depending upon an internal cause, to excite action in the part.

As from its great lightness it is apt to swim upon the contents of the stomach, and to occasion pain at its upper orifice, it is necessary that it be always exhibited in a state of minute division. In order to reduce it to powder, it must be previously moistened with a little alcohol. It may then be given as a julep, mixture, &c. with sugar, magnesia, nitre, or suspended in the form of an emulsion, by means of mucilage, yolk of egg, almonds, vinegar, or sugar ; it is also taken in the form of pills, with the fœtid gums, &c. ; and dissolved in oil, alcohol, or vinegar, is made use of externally. Internally, it may be given in small doses, of from two to six grains, repeated at short intervals, as its effects are very transient ; or, in large doses of about twenty grains.

OPIUM.

OPIUM, when taken into the stomach, to such an extent as to have any sensible effect, gives rise to a pleasant serenity of mind, in general proceeding to a certain degree of langour and drowsiness. The action of the sanguiferous system is diminished, the pulse becoming for the most part softer, fuller, and slower than it was before.

By many, on the contrary, it is said, in the first instance at least, to increase the frequency of

the pulse, and the heat of the body. It diminishes all the secretions and excretions, except the cuticular discharge, which it frequently augments in a very sensible degree. It excites thirst, and renders the mouth dry and parched.

Opium taken into the stomach in a larger dose, gives rise to confusion of the head and vertigo. The power of all stimulating causes of making impressions on the body, is diminished; and even at times and in situations when a person would naturally be awake, sleep is irresistibly induced. In still larger doses, it acts in the same manner as the narcotic poisons, giving rise to vertigo, head-ach, tremors, delirium, and convulsions; and these terminating in a state of stupor, from which the person cannot be roused. This stupor is accompanied with slowness of the pulse, and with stertor in breathing; and the scene is terminated in death, attended with the same appearances as take place in an apoplexy.

From these effects of opium in a state of health, it is not wonderful that recourse should have been had to it in disease, as mitigating pain, inducing sleep, allaying inordinate action, and diminishing morbid sensibility. That these effects result from it, is confirmed by the daily experience of every observer; and as answering one or other of these intentions, most, if not all, of the good consequences derived from it in actual practice are to be explained. If, therefore, by a sedative medicine, we mean an article capable of allaying, assuaging, mitigating, and composing, no substance can have

a better title to the appellation of sedative than opium.

Some practitioners are averse to its use where an active inflammation takes place; but others have recourse to it in such cases, even at an early period, especially after blood-letting; and where such affections are attended not only with pain and spasm, but with watchfulness and cough, it is often productive of the greatest benefit. Opium combined with calomel, has of late been extensively employed in every form of active inflammation, and with the greatest success. It is found also to be of very great service in allaying the pain, and preventing the symptomatic fever liable to be induced by wounds, fractures, burns, or similar accidents.

In intermittents, it is said to have been used with good effect before the fit, in the cold stage, in the hot stage, and during the interval. When given in the hot stage, it has been observed to allay the heat, thirst, head-ach, and delirium, to induce sweat and sleep, to cure the disease with less bark, and without leaving abdominal obstructions or dropsy.

It is often of very great service in slow nervous fevers, when patients are distressed with watchfulness or diarrhœa. But where these, or similar circumstances do not indicate its use, it is often distressing to patients by augmenting thirst and constipation.

In small-pox, when the convulsions before eruption are frequent and considerable, opium is

liberally used. It is likewise given from the fifth day onwards, and is found to allay the pain of suppuration, to promote the ptyalism, and to be otherwise useful.

In dysentery, after the use of gentle laxatives, or along with them, opium, independently of any effect it may have on the fever, is of consequence in allaying the tormina and tenesmus, and in obviating the laxity of bowels which so frequently remains after that disease.

In diarrhœa, the disease itself generally carries off any acrimony that may be a cause, and then opium is used with great effect. Even in the worst symptomatic cases, it seldom fails to alleviate.

In cholera and the water-brush, it is almost the only thing trusted to.

In colic, it is employed with laxatives; and no doubt often prevents ileus and inflammation, by relieving the spasm. Even in ileus and in incarcerated hernia, it is often found to allay the vomiting, the spasms, the pain, and sometimes to diminish the inflammation, and prevent the gangrene of the strangulated gut.

It is given to allay the pain, and favour the descent of calculi; and to relieve in jaundice, and the difficulty of discharging urine proceeding from spasm.

It is of acknowledged use in the different species of violent spasms or contractions of the muscles; affords relief to the various spasmodic symptoms of depraved digestion, hysterics, hypo-

chondriac affections, asthma, bite of a mad dog, &c. and has been found useful in some kinds of epilepsy.

In syphilis it is only useful in combating symptoms, and in counteracting the effects resulting from the improper use of mercury, for it possesses no power of overcoming the venereal virus.

It is particularly serviceable in gout and rheumatism.

It is found useful in certain cases of threatened abortion and lingering delivery, in convulsions during delivery, and in the after pains and excessive flooding.

The only form perhaps necessary for opium, is that of pill; and as it is so soluble in every menstruum, there seems the less occasion for the addition of either gum or soap. This form is more apt to sit on the stomach than any liquid form, but requires rather more time to produce its effects. The administration of opium to the unaccustomed, is sometimes very difficult. The requisite quantity of opium varies wonderfully in different persons, and in various states of the same person. A quarter of a grain will, in one adult, produce effects which ten times the quantity will not do in another; and a dose that might prove fatal in cholera or colic, would not be perceptible in mania, or in many cases of violent spasms. The lowest fatal dose to the unaccustomed, as mentioned by authors, seems to be four grains; but a dangerous dose is so apt to puke, that it has seldom

time to occasion death. When given* in too small a dose, it is apt to produce disturbed sleep, and other disagreeable consequences; and with some constitutions it seems not to agree in any dose or form. Often, on the other hand, from a small dose, sound sleep, and alleviation of pain will be produced, while a larger one gives rise to vertigo and delirium. Some prefer the repetition of small doses, others the giving of a full dose at once. In some it seems not to have its proper effect till after a considerable time. The operation of a moderate dose, is supposed to last in general about eight hours from the time of taking it.

Opium operates more powerfully in lax habits, than in the opposite circumstances, and its effects are far more beneficial.

Those who have long accustomed themselves to its use, cannot, without great difficulty, leave it off. The best substitutes are æther, or other volatile spirits, camphor, musk, castor, the fœtid gums, and aromatics, assisted by exercise, music, and cheerful conversation.

* Where opium is given as a stimulus, it ought to be administered in small and frequently repeated doses. Where the intention is to mitigate pain or irritation, it ought, on the contrary, to be given in a large dose, and at distant intervals.

It is of importance to observe, that where evacuations have been previously procured, or when a state of diaphoresis is present, opium is much more genial and salutary than while the skin is dry, or the bowels torpid. Its usual dose is one grain to an adult.—*Murray's Materia Medica.*

Laudanum; or *Tincture of Opium*.—It is made with opium, in the proportion of one grain to about thirteen of the menstruum, London College; by the Edinburgh, in the proportion of one grain to twelve of the menstruum. **DOSE**:—From ten to thirty drops, to those not accustomed to its use.

Paregoric Elixir; or *Compound Tincture of Opium*.*—It is made with opium, in the proportion of one grain to two hundred and sixty of the menstruum. **DOSE**:—From twenty to a hundred drops, in any agreeable liquid. Half an ounce, or two hundred and forty drops of this elixir, contain about a grain of opium.

Syrup of White Poppy Heads; or *Diacodium*.—This syrup is given to children, in doses of two or three drachms; to adults, from half an ounce, to an ounce and upward.

Extract of Poppy Heads.—It is said that three grains of this preparation are equivalent to one grain of opium, and that the extract is not liable

* For dry tickling coughs, incident to age, and for those asthmas which such persons are subject to, paregoric elixir is an excellent remedy, and may be given with simple oxymel, oxymel of squills, mucilage of gum arabic, &c. as the case may require. It is also given in smaller doses to alleviate coughs and colds in general. Children in the whooping cough, after gentle doses of emetics have been administered, may take from five to ten drops of paregoric elixir alone, or joined with the antimonial wine, and sweet spirit of nitre.

to produce nausea or giddiness, which generally follow the use of pure opium.

Quantities of opium contained in the following officinal preparations:—Powder of ipecacuan with opium (Dover's powder;) is one grain of opium in ten of the powder.—The opiate powder contains also one grain of opium in ten of the powder. Compound powder of chalk with opium; in forty-four grains, one grain of opium is included.—In the opium pills of the London Pharmacopeia, one grain of opium is in *five* grains; and in the Edinburgh Dispensatory, one grain of opium is in *ten* grains of these pills.

The opium confection of the London College contains, in thirty-six grains of it, one grain of opium.

The opium electuary of the Edinburgh College contains, in sixty grains or one drachm, a grain of opium: and the japonic Edinburgh confection contains, in one hundred and ninety-three grains, one grain of opium. The *troches* or *lozenges of opium and liquorice*, of this college, contain in each drachm, a grain of opium: the drachm is directed to be divided into six troches.

The narcotic effects of an over dose of opium, are counteracted by coffee, thus prepared: take an ounce of the best Mocha coffee, newly burnt, made into one dish, and taken immediately after grinding it, without milk or sugar; the dish may be repeated at the interval of a quarter or half an hour. The same preparation was highly valued for the asthma, by the late eminent physi-

cian, Sir John Floyer, and is also recommended in the fits of the periodic asthma by Drs. Percival and Pringle.

For the further treatment of persons who have taken opium in too large a quantity, see *Vegetable Poison*.

The Opium Liniment, commonly called *Anodyne Balsam*, is made in the proportion of one grain of opium, to thirty of the menstruum. For an account of this liniment, see *Surgery*, Part II.

MUSK,

Is a medicine of very great efficacy, and for which, in some cases, there is hardly any substitute. When properly administered, it sometimes succeeds in the most deplorable circumstances.*

* Dr. Wall, of Oxford, has communicated (in the *Philosophical Transactions*, No. 474,) an account of some extraordinary effects of musk, in convulsive and other diseases, which have too often baffled the force of medicine. He observes, that the smell of perfumes is often of disservice, where the substance taken inwardly, and in considerable quantity, produces the happiest effects: that two persons labouring under a subsultus tendinum, extreme anxiety, and want of sleep, from the bite of a mad dog, by taking two doses of musk, each of which were sixteen grains, were perfectly relieved from their complaints. He likewise observes, that convulsive hiccoughs, attended with the worst symptoms, were removed by a dose or two, of ten grains: and that in some cases, where this medicine could not, on account of strong convulsions, be administered to the patient by the

It raises the pulse without heating much ; it allays spasms, and operates remarkably on the brain, increasing the powers of sensation, and voluntary motion. It may be employed in every instance of nervous fever, especially when attended with delirium, or convulsive affection of any particular organ, or of the whole system, or subsultus tendinum, &c. It is also used with the greatest benefit in small-pox, measles, and phlegmonic diseases, accompanied with typhoid fever ; and in many spasmodic complaints, as chin-cough, epilepsy, locked jaw, hysterics, &c. It is most conveniently given in substance, in powder, in doses of three grains or upwards, repeated every one or two hours. Its best preparation is the tincture, but in this form it is often impossible to give such a quantity of the musk as is necessary for the purpose ; and hence this article is more frequently employed under the forms of bolus, julep, or mixture. The *mixture* or *julep*, is thus prepared :

mouth, it proved of service when injected as a elyster. He adds, that under the quantity of six grains, he did not find much effect from it ; but that taken to ten grains, and upwards, it never failed to produce a mild diaphoresis, without at all heating or giving any uneasiness ; that on the contrary, it eased pain, raised the spirits, and after the sweat broke out, the patient usually fell into a refreshing sleep.

The dose of musk has sometimes been increased, particularly in convulsive disorders, to the quantity of a scruple, or half a drachm every three or four hours, with two or three spoonsful of the musk mixture between. It is given combined with opium, in violent contractions of the muscles, and with mercury, in the bite of a mad dog.

take of musk, two scruples; gum arabic, powdered, double-refined sugar, of each one drachm; orange flower water, or rose water, six ounces. Rub the musk first with the sugar, then with the gum, and add either of the above waters, by degrees. DOSE : one to three large spoonful.

Volatile spirits are in many cases an useful addition to musk, and likewise enable water to keep somewhat more of the musk dissolved than it would otherwise retain.

CASTOR—(RUSSIA,)

Is commonly joined in prescription with the deobstruent fœtid gums, volatile alkaline salts, the volatile oily spirits, and other materials of similar virtues. The volatile oily spirits are well adapted also as menstrua for dissolving the active matter, both of the castor and of the fœtid gums; at the same time that they prove in many cases excellent additions to their virtue, particularly in some hysteric disorders, and the several symptoms which accompany them: in this view an ounce of Russia castor, and half as much asafœtida, are digested about six days, in a close vessel, with a pint of the volatile spirit.—See compound tincture of castor, *Edin. Dis.*

The London Pharmacopœia orders a simple tincture, which is made with one ounce of Russia eastor, digested for ten days in a pint of proof spirit. DOSE of each of the tinctures, from twenty to sixty drops.

Castor is an ingredient in some other compositions, as the compound powder of myrrh; it is exhibited most advantageously in the form of powder, in doses of from ten to twenty grains, and in clysters to a drachm. Russia castor is an excellent antispasmodic, is very little heating, and acts particularly upon the uterine system. It is given with advantage in typhoid or low nervous fevers, in spasmodic diseases, especially in epilepsy and hysteria, in suppression of the menses, and in cases of difficult parturition.

WILD VALERIAN.

WILD valerian is a medicine of great use in nervous disorders, and is particularly serviceable in epilepsies, proceeding from a debility in the nervous system.

Some recommend it as useful in procuring sleep, particularly in fever, even when opium fails: but it is principally useful in affections of the hysterical kind.

The common dose is from a scruple to a drachm in powder; and in infusion from one to two drachms. Its unpleasant flavour is most effectually concealed by adding a few drops of the essence of mace.—See *Appendix—Spice Essences*.

A simple and a volatile tincture of valerian are prepared; the dose may be a tea-spoonful or two of either.

SOOT OF WOOD.

WOOD soot varies somewhat according to the nature of the wood from which it is produced, and the strength of the fire employed in its production. The more resinous the wood, the more the soot abounds with bitter oily matter. It consists principally of charcoal, empyreumatic oil, and acetous acid. It often contains volatile and fixed alkali. Its medical properties are to be ascribed solely to the empyreumatic oil.

The volatile salt and spirit are sometimes kept in the shops, and have in many cases been preferred to those of the animal kingdom.

Wood soot is directed in hysteric cases, and in different nervous disorders, as an antispasmodic and corroborant. It is used chiefly in the form of a spirituous tincture, in conjunction, commonly, with asafœtida, or other materials of a similar nature: the officinal tincture is drawn from two ounces of soot, and one of asafœtida, with a pint of proof, and a pint of rectified spirit.

DOSE : from a tea-spoonful to a common spoonful twice a day.

Fuller, in his *Domestic Pharmacopœia*, has a medicine under the title of "*Hysteric Drops*;" similar to the above tincture of soot, only with the addition of myrrh, which is no very material ingredient with asafœtida and soot.

MILLEPEDES.

THESE insects may be commodiously swallowed entire, as they spontaneously contract themselves, on being touched, in the form of a pill. Dr. Aikin says, that two hundred have been taken every day for some time together, without producing any considerable effect; but Hoffman and Fuller* observe, that in large doses, they sometimes produce an universal heat and thirst, with a pain in the region of the pubes, and a scalding of urine. They are celebrated as resolvents, aperients, and

* *Fuller's Balsamic Pills*; (now frequently prescribed by eminent physicians, in asthmas, &c.) are thus prepared: take of millepedes, fresh prepared and powdered, three drachms; gum ammoniacum, one drachm and a half; flowers of benjamin, one drachm; saffron and balsam of Peru, of each fifteen grains; sulphurated oil (balsam of sulphur,) sufficient to make it up into pills, which form of the usual size. Dose: two to six pills, night and morning, or oftner if required.—See *Fuller's Pharm.*

To assist expectoration, &c. I have frequently added to each drachm of these pills, one grain of emetic tartar previously rubbed to a very subtle powder, in a *glass mortar*, with a small quantity of loaf sugar, that it may be the more equally divided and mixed in the mass, which is then formed into ten or twelve pills; or, instead of the tartar emetic, two or three grains of powder of ipecacuan may be used with equal advantage.

Dose, and time of taking, to be so regulated that they may excite a gentle nausea only, and afterwards, not to be interrupted in their action by too soon introducing food into the stomach.

diuretics; in jaundices, asthmas, scrophulous and other disorders; but their virtues have been much over-rated.

Prepared Millepedes.—They are prepared by inclosing them in a thin canvass cloth, and suspending them over hot spirit of wine, in a close vessel, till they are killed by the steam, and rendered friable.

This is the last remains of a justly exploded practice, which ascribed extraordinary virtues to whatever was barbarous and disgusting.

Wine of Millepedes.—Slightly bruise two ounces of live millepedes, and let them be infused for a night in a pint of rhenish wine, after which, the liquor is to be pressed out through a strainer. It is directed to be given from half an ounce to two ounces.

CANTHARIDES.

THE internal use of cantharides or Spanish flies, is at all times doubtful, and requires the most prudent management. They have, however, been sometimes employed with success in dropsy, and in diseases of the urinary organs, arising from debility. They are given in substance, in fine powder, in very small doses, viz. from a quarter of a grain to three grains; or in tincture.

Tincture of Cantharides; take of bruised cantharides, two drachms; cochineal, powdered, half a drachm; proof-spirit, one pint and a half. Digest for eight days, then strain through paper. **Dose**: from ten to twenty drops, as a diuretic.

It is applied externally as a stimulant, &c.—See *Blisters*.

The inconveniencies arising from the use of Spanish flies, whether taken internally, or applied externally, are best obviated by drinking plentifully of bland emollient liquids, such as milk, emulsions, &c. The specific property of counteracting cantharides ascribed to camphor, has no foundation. In all cases the tincture of cantharides is preferable, for internal use, to the flies in powder. Dr. Mead observes, that the obstinate gleet which often remains after the cure of the venereal disease, are effectually remedied by cantharides.

BURNT SPONGE.

THIS medicine has been used for a considerable time, and employed against scrophulous disorders, and cutaneous foulnesses, in doses of a scruple and upwards. Its virtues probably depend on the presence of volatile alkali. It also contains charcoal; and its use may be entirely superseded by these substances, which may be obtained in other manners, at a much cheaper rate.—*Duncan's New Edin. Dis.*

Burnt sponge, made into lozenges,* is frequently employed in the cure of the *bronchocele* (a tumor on the fore part of the neck) by Dr. Cheston, of this city, and other eminent physicians and surgeons.

They are thus prepared : take of burnt sponge, half a drachm ; mucilage of gum arabic, a sufficient quantity to form into lozenges of the usual size. These when dry are suffered gradually to dissolve on the tongue, they are to be used morning or evening, and the dose regularly continued ; taking every precaution to prevent the sponge lodging on the teeth, to which it is peculiarly injurious.

Further particulars for the treatment of this complaint will be given, together with Dr. Bates's Coventry recipe, under the head Surgery.

MASTICHE AND OLIBANUM.

MASTICHE is recommended in doses of from half a scruple to half a drachm, as a mild corroborant and restringent, in old coughs, spitting of blood, diarrhæas, weakness of the stomach, &c. It is said that this resin is commonly employed by chewing it, in Chio, and among the Turkish women, for sweetening the breath, and strengthening the gums and teeth ; and that when thus used, by procuring a copious excretion of saliva, it proves serviceable in catarrhus disorders.

* This preparation may be had at the author's Laboratory.

Olibanum is recommended in diseases of the head and breast, in spitting of blood, and in alvine and uterine fluxes : the dose is from a scruple to a drachm or more.

PURIFIED

SALT, OIL, TINCTURE, AND BALSAM OF AMBER.

THIS salt, on account of its great price, is prevented from coming much into use, and probably its real virtues, though doubtless considerable, fall greatly short of the opinion that has been entertained of them. It is both aperient, and diuretic, and on account of its retaining some portion of the oil, anti-hysterical, &c. The dose is usually from five to fifteen grains.

Rectified Oil of Amber, given in doses of ten or twelve drops, and from that to thirty drops, heats, stimulates, and promotes the fluid secretions : it is chiefly celebrated in hysterical disorders, and in deficiencies of the uterine purgations. Sometimes it is used externally, in liniments, for weak or paralytic limbs.

Tincture of Amber.—Boerhaave, Hoffman, and others, extol this tincture as having incredible efficacy in all those distempers which proceed from weakness and relaxation, and in hypochondriacal, hysterical, and cold languid cases.

Dose : from twenty to eighty drops, taken on sugar, or in white wine. If part of the spirit be

abstracted from the tincture, by a gentle heat, the remainder proves a very elegant aromatic balsam.

Balsam of Amber is strongly recommended by Quincy and others, against vertigoes, epilepsies, palsies, and also in hysterical and hypocondriacal affections. **Dose:** from six to sixteen drops: but its greatest use is as a detergent and vulnerary; useful in all diseases of the breast, and particularly of the urinary passages, which it wonderfully cleanses, not only in the gravel and other obstructions, but deterges and heals all ulcerations in those parts. The tincture and balsam of amber are spoken of by Dr. Aikin, (see his *Materia Medica*,) as of great efficacy in hysterical disorders, cachexies, the fluor albus, some rheumatic pains, and in debilities and relaxations in general: in some cases of this kind, they have cured after bark and other corroborants of the vegetable kingdom had been given with little effect.

Amber in substance, was formerly accounted an absorbent, and as such, had a place in the compound powder of crabs' claws: it certainly has no title to this class of medicines, as not being acted upon by an acid. Chaptal, a celebrated French chymist, says, the medical use of amber consists in burning it, and receiving the vapour on the diseased part. These vapours are strengthening, and remove obstructions. The oil of amber, he recommends to be applied to the same use: and a syrup of amber, made with the spirit of amber and opium, he says, is used to advantage as a sedative anodyne medicine.

PURIFIED SAL AMMONIAC.

THIS salt is a powerful attenuant and deobstruent. Boerhaave observes that its liberal and continued use renders the blood so thin as to burst through the vessels, particularly those of the lungs and the urinary organs. In doses of half a drachm, or a drachm, dissolved in water, if the patient be kept warm, it generally proves sudorific: by moderate exercise, or walking in the open air, its action is determined to the kidneys: in larger doses it loosens the belly. It has, by some, been held a secret for the cure of intermittents; and is undoubtedly, in many cases, as an aperient, an excellent assistant to the Peruvian bark, where that astringent drug by itself would produce dangerous obstructions, or aggravate those already formed.

Externally applied, it is a valuable remedy. It may act in two ways.

1. By the cold produced during its solution.

It is from this cause that fomentations of sal ammoniac probably prove beneficial in mania, apoplexy from plethora, and in violent head-achs. When used with this intention, the solution should be applied as soon as it is made.

2. By the stimulus of the salt.

On this principle we may explain its action as a diseutient in indolent tumours of all kinds, contusions, gangrene, scaly tetters, inflammation of the eyes, the inflammatory quinsy, and in stimulating elysters. In some cases, as in chilblains and

other indolent inflammations, both modes of action may be serviceable. When first applied, the coldness of the solution will diminish the sense of heat and uneasiness of the part, and the subsequent stimulus will excite a more healthy action in the vessels. Some use this salt in form of lotion in certain ulcers, and for removing common warts, which it does very effectually.

Volatile Salts—Ammoniac, Hartshorn, &c.—The volatile alkali, obtained from hartshorn, from bones and other animal substances, whether of a solid or a fluid state, is precisely the same with that obtained from sal ammoniac. They are particularly useful in lethargic and apopleetic cases; in hysterical and hypocondriacal disorders, and the languors, head-achs, inflations of the stomach, flatulent colics, and other symptoms attending those distempers, especially in aged persons, and those of a phlegmatic habit: in languors and faintings, their stimulating* smell gives oftentimes immediate relief.

In some kinds of fevers, particularly those of the low kind, accompanied with a cough, hoarse-

* Godfrey's fashionable smelling salts, recommended on account of their great pungency, are made by re-subliming the volatile salt of sal ammoniacum, with a few drops of English oil of lavender; they, however, should be cautiously made use of, lest they corrode the nervous coat of the nostrils, and thereby loss of smell be produced: or, by persons of delicate or weak constitutions, who are

ness, redundance of phlegm, and lentor of blood, they are of great utility; liquefying the thick juices, raising the pulse, and exciting a salutary diaphoresis. In putrid fevers, scurvies, and wherever the mass of blood is thin and acrimonious, they are hurtful. These salts are most commodiously taken in a liquid form, largely diluted; or in that of a bolus, which should be made up only as wanted, the salt soon flying off. The dose is from five grains to a scruple.

Volatile Liniment of Ammonia—Take of water of ammonia, half an ounce: olive-oil, one ounce and a half; shake them together in a phial till they are mixed.

Stronger Liniment of Ammonia—Take of water of pure ammonia, one ounce; olive-oil, two ounces; mix as above.

These liniments are frequently used externally as stimulants, and to produce slight inflammations. In sore throats, a piece of flannel moistened with the weak or stronger liniment, as the case may require, applied to the throat, and renewed every four or five hours, is one of the most efficacious

subject to bleedings from the lungs, &c. and the more especially in cases of head-ach or heaviness, which arise from obstructions of the internal veins of the head; because there is danger from rupturing some of those blood vessels. Snuffs, and other powerful sternutatories, are equally improper. In these cases the acetous acid may advantageously be applied.—See vinegar.

remedies. By means of this warm stimulating application, the neck, and sometimes the whole body are put into a sweat, which, after bleeding, either carries off or lessens the inflammation. When too strong, or too liberally applied, they sometimes occasion inflammations, and even blisters. Where the skin cannot bear their acrimony, a larger proportion of oil may be used.

Spirit of Myndererus, or Water of Acetated Ammonia.—Take of volatile salt of sal ammoniac, one ounce; distilled vinegar, two pints, or what may be sufficient to saturate the ammonia. Myndererus spirit is an excellent aperient saline liquor; taken warm in bed, and assisted by a warm regimen, it generally proves an useful and powerful diaphoretic or sudorific: and as it operates without quickening the circulation, or increasing the heat of the body, it is admissable in febrile and inflammatory diseases, in which the use of stimulating sudorifics are attended with danger. Its action may likewise be determined to the kidneys, by walking about in a cool air. The common dose is half an ounce, either by itself, or along with other medicines adapted to the same intention. Its strength is not a little precarious, depending much on that of the vinegar. An aërated spirit, or spirit of myndererus abounding with fixed air, is prepared by making it in a close vessel, which should afterwards be strictly confined by tying wet bladder over the cork, and kept in a cool place, with the mouth of the bottle

inverted, in the same manner as æther, or any other very volatile spirit ought to be kept. Spirit of myndererus thus made, is most proper for internal use in fevers and other inflammatory complaints. Externally, myndererus' spirit mixed with an equal quantity of rectified spirit of wine, and five or six times its quantity of elder, rose, or simple distilled water, may be made use of as an embrocation, to abate inflammations, &c. in the same way as Goulard's lotion; and it often succeeds where that lotion is too repellent.—See *Surgery*.

Volatile Spirit of Sal Volatile, or Compound Spirit of Ammonia—is made, according to the London College, by mixing a drachm of the essential oil of nutmeg, and a drachm of oil of lemon, in one pint of the spirit of ammonia; and according to the Edinburgh College, by putting to eight ounces of the spirit, one drachm and a half of the distilled oil of rosemary, and one drachm of oil of lemon-peel.

Both the foregoing compositions turn out excellent, provided the oils are good. The dose is from twenty drops to sixty or more. The oil of cloves is also introduced by Murray, in his recipe for this volatile aromatic spirit. Volatile salts thus united to aromatics, are not only more agreeable in flavour, but likewise more acceptable to the stomach, and less acrimonious than in their pure state. Volatile spirits are impregnated with guaiacum, assafoetida, bark, valerian, &c.; which

has been mentioned under those heads ; they also may occasionally be prepared of any particular flavour, or adapted to particular purposes ; thus, in hysterical disorders, where the uterine purgations are deficient, a preparation of this kind, made with the essential oils of rue or savin, proves an useful remedy : in weakness of the stomach, oil of mint may be used ; and in flatulent cases, those of aniseeds or sweet fennel seeds : the last, remarkably cover the pungency of the volatile spirit, and render it supportable to the palate. The dose of these compounds is the same as the spirit of sal volatile.

Spirit of Hartshorn, or Volatile Liquor of Hartshorn.—DOSE: from thirty to a hundred drops. Ten drops of a well made spirit, or saturated solution of volatile alkaline salts, are reckoned to contain about a grain of the salt.

The volatile alkalies* obtained from different substances are, in their state of perfect purity, as already said, one and the same thing. But as first distilled from the subject, they are largely impregnated with its oil, rendered fœtid or em-

* Perhaps the most effectual remedy yet employed against the bite of venomous serpents, is caustic volatile alkali, given in water internally, as strong as it can be borne, and frequently repeated for a considerable time ; besides applying the same to the wounded part. Eau de luce, spirits of hartshorn, or any similar preparation of this substance that can be had, will answer the purpose. It has been found effectual in the cure of stings from

pyreumatic by the process in which the salt or spirit was generated; this oil, when separated by frequent distillations, and by filtration through wetted paper, forms the rectified *animal oil*, said by Hoffman and others, to act in doses of half a drop, as diaphoretics, anodynes, and antispasmodics. How far it possesses the virtues that have been ascribed to it, has not yet been sufficiently determined by experience.

The Spirit and Oil of Hartshorn (from the latter of which the animal oil is made) will, however highly rectified, gradually lose in keeping, the qualities they had received from that process, and return more and more towards their original fœtid state.

bees or wasps in the inside of the throat, which sometimes happen in our cyder counties, on drinking new cyder in which there may be half drowned bees or wasps.

An account of some particular cases in which eau de luce has been successful in the bites of serpents in the East Indies, will be given under the head *Animal Poison*.

The use generally made of eau de luce, is for smelling to, in faintings, &c. but it is sometimes internally given as a powerful stimulant and diaphoretic, to adults, from fifteen drops to sixty, on the sudden subsiding of exanthemata and receding of arthritic appearances from the extremities. It is thus prepared: take of alcohol one ounce; water of pure ammonia four ounces; rectified oil of amber one scruple; soap ten grains. Digest the soap and oil of amber in the alcohol till they are dissolved; then add the water of pure ammonia, and mix them by shaking.

Hartshorn, rasped or shaved, gives out to water by boiling, a soft gelatinous matter, of scarcely any particular flavour. The decoction and jelly are sometimes directed for diarrhæas and other disorders, partly as affording a mild nutriment, and partly for obtunding and incrassating acrimonious thin humours. An elegant hartshorn* jelly is prepared, by boiling half a pound of the shavings in three quarts of water, till two parts are wasted, and adding to the strained liquor, an ounce of seville orange, or of lemon juice; a quarter of a pint of mountain wine, and half a pound of refined sugar; and boiling down the mixture to a due consistence; to which may be added one or more tea-spoonsful of the essences of orange and lemon peels. Compositions of this kind are very grateful to many in acute diseases.

Calcined Hartshorn.—These horns burnt to whiteness, yield an earth, which is employed in the officinal white decoction, or, as it is now more properly stiled, the decoction of hartshorn. It is thus prepared: take of burnt hartshorn, finely pulverized, two ounces; gum arabic, six drachms; distilled water, three pints; boil, constantly stirring, to two pints, and strain.

This decoction is used as common drink in acute diseases attended with a looseness, and where

* The shavings of ox bones, which afford little jelly, are commonly substituted for hartshorn shavings; those of hartshorn are not so white, nor are they so large or fine to the eye as the bone shavings.

acrimonious humours abound in the first passages. The gum is added, in order to render the liquid slightly glutinous, and thus enable it to sustain more of the earth. It may be observed, that the water is not enabled by the boiling to dissolve any part of the calx; and that in the decoction, the earth is only diffused in substance through the water, as it would be by agitation. For these reasons, this formula is now rejected by the Edinburgh College, notwithstanding the reputation in which it was held by Dr. Sydenham, and other names of the first eminence. But, as an absorbent of a similar nature, this college has now introduced the

Chalk Mixture or Potion; as it is differently called by the Colleges; by that of London, the chalk mixture is thus made: take of prepared chalk, one ounce; double-refined sugar, six drachms; gum arabic powdered, one ounce; distilled water, two pints; mix them.

The Chalk Potion of the Edinburgh Dispensatory, is prepared according to the following recipe: take of prepared chalk, one ounce; purest refined sugar, half an ounce; mucilage of gum arabic, two ounces; rub them together, and add by degrees, two pounds and a half of water; spirit of cinnamon, two ounces. These two preparations are nearly allied both in their name and nature; but that of the Edinburgh College, is most agreeable to the palate, from containing a portion of cinna-

mon-water, by which the disagreeable taste of the ehalk is taken off.

These preparations are valuable remedies in diseases arising from, or accompanied with, acidity in the primæ viæ. They are usefully employed in diarrhæa arising from that cause, both in infants and adult persons; the mucilage in the latter, not only serves to keep the chalk uniformly diffused, but also improves its virtues by sheathing the internal surface of the intestines. *DOSE*: for an adult, a small tea-cupful frequently taken, particulary after a griping or loose motion.

Compound Powder of Chalk.—Take of prepared chalk, four ounces; einnamon, two ouncees; tormentil, gum arabic, of each one ounce and a half; long pepper, two drachms; powder them separately, and mix them.—*Lond. Phar.*

DOSE: from half a draehm to a drachm.

Chalk Powder.—Take of white chalk prepared, four ounces; nutmeg, half a drachm; einnamon, one draehm and a half; powder them together. *DOSE*: the same as above.—*Edin. Dis.*

The addition of the aromatics in the above formulæ, eoincides with the general intention of the remedy, which is indicated for weakness and acidity in the stomaeh; and for looseness from acidity.

Compound Powder of Chalk with Opium.—Take of compound powder of chalk, four ounces; hard

purified opium, powdered, forty-five grains; mix them.

From the addition of the opium, this remedy becomes still more powerful than the above, in restraining diarrhæas. One grain of opium is contained in forty-three grains of the compound powder of chalk.

DOSE: from a scruple to half a drachm or more.

COMPOUND POWDER OF CONTRAYERVA.

TAKE of contrayerva, powdered, two ounces and a half; compound powder of crabs' claws, three quarters of a pound; mix them. DOSE: from fifteen to forty grains. It is often taken with myndererus' spirit, in barley water, &c.

This medicine has a very good claim to the title of an alexipharmic and sudorific. The contrayerva by itself proves very serviceable in low fevers, where the vis vitæ is weak, and a diaphoresis to be promoted. It is possible that the crabs' claws are of no farther service than as they divide this active ingredient, and make it sit more easily on the stomach. It was formerly directed to be made up into balls with water, and was then called Gascoign's, or contrayerva balls; which are now laid aside as needless, for it was necessary again to reduce the balls into powder before they could be used.

Compound Powder of Crabs' Claws.—Take of crabs' claws, prepared, eight ounces; chalk, red

coral, each prepared, one ounce and a half; mix them. This powder has lost several of its ingredients without any injury to its virtues; and possibly it would still bear a further reduction; for the crabs' claws and chalk are by themselves at least as effectual as any composition of them with coral. The prepared pearls, amber, &c. which formerly made part of this powder, have been long since left out. Dose: similar to the compound powder of chalk.

Compound Testaceous Powders are made with oyster shells and crabs' eyes; they agree in medical virtues with the preceding articles, and supply the place of a more costly preparation,---the Bezoardic powders.

Of the different absorbent earths, chalk is certainly the best of them, and may be given with the greater safety, because it is most easy of solution; whereas those of the animal kind, (crabs' eyes, &c.) contain, besides their purely alkaline earth, a portion of glutinous matter, which increases their tendency to concreate in the stomach; and if these substances are divested of their conglutinating matter by calcination, they are reduced into acrimonious calces or limes; and thus become medicines of a different class.

Lewis, in his excellent *Dispensatory*, has the following remarks on the absorbent earths:—

“ They have been often given in fevers, under the notion of alexipharmacs and sudorifics, from a supposition that these disorders are occasioned by a latent acid; and,

though this theory is now exploded, the practice built upon it is, in good measure, still continued. So far are absorbents from being useful in these cases, that substances of a directly contrary quality, mild acidulous liquors, are in general the most successful remedies, wherever the *vis vitæ* is not too far depressed; and where it is, the insipid indolent earths can contribute nothing to support or raise it.

It may be proper to take notice of a quality hitherto little expected from these kinds of substances; that of strongly promoting putrefaction. Flesh, mixed with a small proportion of chalk, and exposed to a heat equal to that of the human body, not only corrupts sooner than without this addition, but likewise in a far greater degree, resolving in a few days into a perfect mucus. This quality of the absorbent powders (for the discovery of which, with many other curious experiments on the same subject, the public are obliged to the ingenious Dr. Pringle) seems to forbid their use in all those kinds of fevers, where the animal juices are already too much disposed to a putrefactive state. Perhaps their ill effects would be oftener seen, if it was not for the quantity of acids usually given in acute diseases.

It is certain that in children, and adults of a weak constitution, and whose food is chiefly of the vegetable acescent kind, sundry disorders are occasioned by acidities; these readily discover themselves by sour eructations, the pale colour of the face, and in children by the sour smell and green colour of the alvine feces, which are sometimes so manifestly acid as to raise a strong effervescence with alkaline salts. In these cases, and these only, the use of absorbent earths is indicated.

If there are really no acid juices in the ventricle, these earths are apt to concrete with the mucous matter usually lodged there, into hard indissoluble masses; which have sometimes been thrown up by vomit, or found in the stomach upon dissection. Hence indigestion, loss of appetite, nausea, vomiting, obstructions of the bowels, and other disorders. Sometimes the stomach and intestines have been found lined with a crust, as it

were, of these earthy bodies, which must not only have prevented the separation of the gastric liquor, but likewise closed the orifices of the lacteal vessels, so as to obstruct the passage of the chyle into the mass of blood."

SENEKA ;—OR, RATTLE-SNAKE ROOT.

It is an active stimulus, and increases the force of the circulation, especially of the pulmonary vessels. It has been strongly recommended in pleurisies, peripneumonies, and other inflammatory disorders. Its more immediate effects are those of a diuretic, diaphoretic, and cathartic; sometimes it proves emetic: the two last operations may be occasionally prevented by giving the root in small doses, along with some aromatic simple water, as that of cinnamon. The usual dose of the powder is thirty grains or more. Some have likewise employed it in hydropic cases, and not without success. There are examples of its occasioning a plentiful evacuation by stool, urine, and perspiration; and by this means removing the complaint, after the common diuretics and hydragogues had failed; where this medicine operates as a cathartic, it generally proves successful.

The Senegaro Indians are said to prevent the fatal effects of the bite of the rattle-snake, by giving it internally, and by applying it externally to the wound. It has been used with good success as a stimulating gargle in the croup,

VIRGINIAN SNAKE-ROOT.

It is recommended and esteemed one of the principal remedies—

1. In intermittent fevers, especially when the paroxysms do not terminate by sweating, and to assist the action of Peruvian bark, in obstinate cases.

2. In typhus, and in putrid diseases, to support the vis vitæ, and to excite gentle diaphoresis.

3. In exanthematous diseases, when the fever is of the typhoid type, to support the action of the skin, and keep out the eruption.

4. In gangrene.—It is used as a gargle in the putrid sore throat.

It is exhibited,

1. In powder, which is the best form, in doses of twenty or thirty grains.

2. In infusion, with wine or water. By decoction, its powers are entirely destroyed. It is often combined with Peruvian bark, or with camphor.

Tincture of Snake-Root.—Take of Virginian snake-root, bruised, three ounces; proof-spirit, two pints; digest for eight days, and strain. This tincture, which contains the whole of the virtues of the root, may be taken to the quantity of a table-spoonful or more every five or six hours; and to this extent it often operates as an useful diaphoretic. Snake-root is an ingredient in the compound, or Huxham's tincture of bark.

CANELLA ALBA, AND WINTER'S BARK.

CANELLA ALBA is often employed where a warm stimulant to the stomach is necessary; it is made use of for this purpose in the aloetic powder (*hiera picra*) of the London College, but with that of Edinburgh, it is an ingredient in the rhubarb wine, bitter wine, the bitter tincture, &c. It is useful as covering the taste of some other articles.

The true Winter's bark is not often met with in the shops, canella alba being generally substituted for it, and by many it is reckoned to be the same. Almost the only use made of it, has been by crews of ships, as a preservative from the scurvy.

TURMERIC, AND MADDER;—THE ROOTS.

TURMERIC acts as a gentle stimulant. It has been celebrated as a deobstruent in diseases of the liver, jaundice, cachexy, dropsy, intermittent fevers, &c. The dose in substance, is from a scruple to a drachm. But its internal use in this country, is almost confined to its being a principal ingredient in the composition of curry-powder, in which form it is used in immense quantities in the East Indies. It is also a valuable dye-stuff, and an excellent chemical test of the presence of uncombined alkalis; for the yellow colour of turmeric is changed by them to a reddish brown.

Madder appears to be possessed of great subtilty of parts, which may possibly render its medical virtues more considerable than they are in general supposed to be. It has been chiefly recommended as a resolvent and aperient, in obstructions of the viscera, particularly of the urinary organs, in coagulations of blood from falls or bruises, in jaundices, and in incipient dropsies. It has lately come into reputation as an emmenagogue, and is said to be a very efficacious medicine of this class.* From one to two scruples of the powder, or two ounces of the decoction, may be given three or four times a day. The extract is now used in scrophula, &c.

PAREIRA BRAVA ;—THE ROOTS.

THEY are highly extolled by the Brazilians and Portuguese, in a great variety of diseases, particularly against suppressions of urine, nephritic pains, and calculus. Geoffroy also found it useful in nephritic disorders ; in ulcers of the kidneys and bladder, the symptoms were soon relieved, and the uleers afterwards healed, by joining to it balsam of eopaiba : that in an humoral asthma, were the patient was almost suffocated by thick phlegm, an infusion of pareira, after many other medicines had been tried in vain, brought on a copious expectoration, which proved a solution of the disease ; that a person, who, from an acute

* See Home's Clinical Cases and Experiments.

pain under the liver, had become in a few hours ictical, had the pain relieved, after bleeding, by the third cup of the decoction, and all the symptoms removed by a continuance of it; and that the same disorder frequently returning, the patient always found relief by a continuance of the same medicine. He cautions against giving too large doses, which might, he observes, raise a heat, and perhaps an inflammation in the kidneys: of the root in substance, he prescribes from twelve grains to half a drachm, and in decoction or infusion two or three drachms; this quantity of the root, bruised, he directs to be boiled in a pint and a half of water till only a pint remains, which is to be strained off, sweetened with a little sugar or honey, divided into three portions, and drank as tea, at intervals of half an hour, and then at longer intervals.

Aikin observes, that the use of this root has not been, in general, accompanied with so much success; but though, like many other medicines, it has not been found to answer the character at first given of it, and has thence fallen into neglect, we may presume from its sensible qualities, that it is not destitute of medical virtues.

Dr. Latham directs the powder of pareira root to be taken in doses of half a drachm, and from that to a drachm.

OIL OF CAJEPUT.

DUNCAN says, this, like other aromatic oils, is highly stimulating, and is principally recom-

mended in hysteria, epilepsy, flatulent colic, and a paralysis of the tongue. *Dose*: from one to four drops on a lump of sugar.

It is applied externally where a warm and peculiar stimulus is requisite; it is employed for restoring vigour after luxations and sprains, and for easing violent pain in gouty and rheumatic cases; in tooth-ach, &c. It is mentioned by several writers on the *materia medica*, as being in very high esteem among the eastern nations: though it has long been in some of the foreign pharmacopœias, it has never entered the list of the British till the last edition but one of the Edinburgh Dispensatory. It is chiefly used internally, and it is particularly said to operate as a very powerful remedy against tympanitic affections.

ASARABACCA;—THE LEAVES.

It is made use of as a principal ingredient in the empirical cephalic snuffs, or sternutatory powders; and is perhaps the strongest of all the vegetable errhines, white hellebore itself not excepted. Geoffroy relates, that after snuffing up three or four grains of the powder of these leaves, he has often observed the discharge from the nose to continue for three days together; and that he has known a paralysis of the mouth and tongue, cured by one dose. He recommends this medicine in stubborn disorders of the head, proceeding from viscid tenacious matter, in palsies, and in

soporific distempers. The formula of the London College, for preparing the compound powder or snuff, is as follows: take of dried leaves of asarabacca, sweet marjoram, syrian herb mastieh, and flowers of lavender, of each one ounce; powder them together. That of the Edinburgh Dispensatory is thus made: take of the leaves of asarum (asarabacca,) three parts; marjoram, lavender flowers, of each one part; prepare as above. Either of these recipes are equally efficacious and agreeable errhines, and superior to most of those usually sold under the name of *herb snuff*. They are recommended in cases of obstinate head-ach, and of ophthalmias resisting other modes of cure, and are taken under the form of snuff, to the extent of six grains at bed-time. It is however, necessary, during their operation, to avoid exposure to cold.

UVA URSI;—THE LEAVES. .

THEY were first employed in medicine with a view to their astringent powers. With this intention, it was used under the form of decoction, for restraining an immoderate flow of the menses; against other hæmorrhagies, in cases of diarrhœa and dysentery; and for the cure of cutaneous eruptions. But it had fallen much into disuse till its employment was again revived by Dr. de Haen, of Vienna. He bestowed very high encomiums on it, against ulcerations of the kidneys, bladder,

and urinary passages. He represents it as capable of curing almost every case of that kind: and even asserts, that in cases of calculus, much benefit is derived from its use; patients after the employment of it passing their water easily and without pain. It has, however, by no means answered the expectations, which, on these grounds, other practitioners formed of it: but in many affections of the urinary organs, it has proved to be a remedy of some use; and is particularly serviceable in alleviating dyspeptic symptoms in nephritic and calculous cases. It has also been serviceable in cystirrhœa or catarrhus vesicæ; and it has been thought to be sometimes productive of advantage in diabetes. It is sometimes used in the form of decoction,* but most frequently in that of powder, from a scruple to a drachm for a dose, repeated twice or thrice a day.

SARSAPARILLA AND SASSAFRAS.

SARSAPARILLA was first brought into Europe by the Spaniards, about the year 1563, with the character of a specific for the cure of the lues venerea, a disease which made its appearance a little before that time, and likewise of several obstinate chronic disorders.

* An infusion of from one to two drachms, in a pint of water, is more agreeable than a decoction, but the decoction is most efficacious.

Whatever good effects it might have produced in the warmer climates, it has proved unsuccessful in this: insomuch that many have denied it to have any virtue at all. However unequal it may be to the character it bore at first, it appears to be in some cases of considerable use as a sudorific, where more acrid medicines are improper. The best preparations are, a decoction and an extract made with water; a decoction of half an ounce of the root, or a drachm of the extract may be taken for a dose. In the Medical Observations, published by a society of physicians in London, there are several instances of its efficacy in venereal maladies, as an assistant to mercury, or when mercury had preceded its use: it oftentimes answered, and that speedily, after mercurialunctions and long continued courses of strong decoctions of guaiacum had failed.

Dr. Harris says, that infants who have received the infection from the nurse, though full of pustules and ulcers, and sometimes troubled with nocturnal pains, are cured by sarsaparilla without mercurials: he directs the powder of the root to be mixed with their food.

Sassafras is used as a mild corroborant, diaphoretic and sweetner, in scorbutic, venereal, cachectic, and catarrhal disorders. Infusions made in water, from the cortical or the woody part, rasped or shaved, are commonly drank as tea: in some constitutions this liquor, by its fragrance, is apt, on first taking, to affect the head; neither

the spirituous preparations nor the watery extract of sassafras are subject to this inconvenience.

MEZEREON.

A decoction is made of two drachms of the cortical part of the fresh root, boiled in three pints of water to two pints. **DOSE:** from four ounces to eight ounces, four times a day. Dr. Russel found this medicine, joined (generally) with a solution of muriated quicksilver, to be very efficacious in resolving venereal nodes, and in a thickening of the periosteum from other causes; in other venereal symptoms, he never found it serviceable. Dr. Munro says, he has not found this decoction of service, unless where mercury had been freely used before, or at the same time with it. The case of a difficulty of swallowing after lying-in, seemingly occasioned by a paralytic affection, and of three years duration, cured by chewing a thin slice of the root as often as the patient could bear to do it, may be seen in Withering's Botanical Arrangement.

Dr. Cullen says, it acts upon the urine and perspiration, without diminishing the strength remarkably; and that in irritable habits, it quickens the pulse, and increases the heat of the whole body. Mr. Pearson, of the Lock Hospital, observes, that, excepting a case or two of lepra,

in which a decoction of mezereon conferred temporary benefit, he very seldom found it possessed of medicinal virtues, either in syphilis, or in the sequelæ of that disease. In scrophula, or in cutaneous affections, it is employed chiefly under the form of decoction, in conjunction with sarsaparilla, sassafras, and guaiacum.—See page 44.

SCAMMONY;—(ALEPPO.)

THIS resin is one of the strongest stimulating cathartics; in cold indolent serous habits it procures generally a plentiful evacuation with great ease and safety: in inflammatory cases, and the more irritable dispositions, it is indeed dangerous; but not more so than the rest of the strong or resinous purgatives; and no otherwise than by virtue of that power on which its efficacy in the opposite circumstances depends.

By the smallness of the dose of this medicine, its easy solubility, and its having little taste, it is fitted for being commodiously taken in almost any form. The officinal preparations of scammony, are as follows: it is made into a powder, with the addition of an equal weight of cream of tartar. It is likewise combined with calomel, jalap, and also with aloes, and with senna.—See page 15.

A scammoniate electuary is composed of one ounce of scammony, aromatised with half an ounce of cloves, half an ounce of ginger, and a scruple of essential oil of caraway seeds, made up

with syrup of roses; of which composition, one drachm and a half contain fifteen grains of the scammony. Agreeable purging troches* are directed by the Brandenburgh Pharmacopœia, and are prepared by grinding together, three drachms of scammony, four drachms of cream of tartar, four drops of oil of cinnamon, and eight ounces of fine sugar, and moistening the mixture with so much rose-water as will render it of a due consistence for being formed: each tablet is made to weigh about a drachm, and consequently contains two grains and a half of scammony.

One of the most elegant liquid preparations is a solution of the scammony, in a strong infusion or decoction of liquorice, poured off from the feces, and made aromatic with some distilled spirituous water or tincture; as those of cardamom seeds. Scammony in substance, if triturated with sugar or almonds into a fine powder, needs no further addition as a corrector; it becomes sufficiently, safe and mild in its operation. Its common dose is from three to twelve grains. The following powder has been much recommended for its utility in

* The author has prepared, for above twenty years, a vermifuge of a similar recipe, but with the addition of calomel; and it probably is not to be excelled as a general worm medicine, by any of the late boasted nostrums. He precedes its use by giving for some time, the Indian pink; occasionally introducing the salt of iron, and purging it off with the vinous preparation of rhubarb. Rhubarb wine is also spoken of as a valuable medicine in scrophulous atrophies, worm and mesenteric fevers; it purges, and is strengthening also.

dropsical and other cases, where a great discharge is required from the system; it has also been made use of against worms, and given to children for cleansing the bowels from slime and viscid humours, which, by obstructing the mesenteric glands, and often in a great measure, the lacteals themselves, produces enlarged bellies, rickets, worms, convulsions, and other dangerous complaints.

Quincy's Basilic, or the Royal Powder.—Take of diagrydium,* ceruse of (diaphoretic) antimony, calomel, and cream of tartar, of each equal parts; powder them together, in a *glass* or *marble* mortar. The usual dose is, two grains to an infant of one year old; increasing a grain for every year, to the age of twenty. It may be mixed up in honey, or jelly, and repeated, if required, every second or third morning, introducing on the intermediate days some tonic medicine, such as bark, steel, port-wine, bitters, &c.

Quincy likewise orders this powder, made into pills, for gouty and rheumatic persons, to dissolve the viscid lentor of the juices, and so prevent its settling upon the joints, to do further mischief. He directs the dose to be from fifteen to forty

* Diagrydium, is scammony baked or roasted, by inclosing it in the fruit of a quince. This preparation was formerly made with the intention of correcting the scammony; but being found erroneous, is now entirely laid aside.

grains; and to be taken at bed-time, or some hours before rising, that the patient may sleep afterwards.

INDIAN PINK.

THE root is given both in powder and infusion; the powder is esteemed most efficacious. The dose is not accurately ascertained, but extends from twelve, to sixty or seventy grains of the powder. It is found to be most efficacious when it purges, which it does not always do without some addition. The exhibition of a vomit previous to the use of the Indian pink, has proved very serviceable. It sometimes produces disagreeable effects on the nervous system, such as giddiness, dimness of the sight, and convulsive motions of the muscles of the eye. These, according to Dr. Garden, are more likely to happen from a small dose than a large one, the latter more certainly proving purging or emetic.

Dr. Lining, on the other hand, represents these effects as consequent upon too large a dose. It is said to act powerfully as a sedative, in abating the exacerbation of low remittent worm fevers. Indian pink is most useful for destroying the lumbrici, which is one of the three kinds of worms that infest the human body; they are about a span long, round and smooth, and are seated for the most part in the upper small intestines, but sometimes are lodged in the stomach, and in any part of the intestines, even to the rectum.

MALE* FERN.

THE efficacy of fern root against worms was known in the time of Dioseorides; and towards the beginning of the last century, Messrs. Andry and Marchant published accounts of successful modes of exhibiting it in these cases. It was, however, fallen into neglect, till a few years ago, when it came again into notice, by being discovered to be the remedy which had become greatly celebrated in Switzerland as a specific in the cure of the tænia or tape-worm. The secret was purchased in 1775, by the late king of France, after its efficacy had been attested upon trial by

* It is distinguished by having the fructification at the back of the leaves, with stalks rising singly from the root, which consists of a great number of long blackish fibres matted together, and issuing from a thick knotted head; of a sweetish subastringent taste, and an earthy, but not disagreeable smell. The root of *female fern* or *common brakes*, is single and very long, seldom of a finger's thickness, yet spreading much by lateral shoots; of a black colour without, spotted within: the taste is viscid, bitter, and more disagreeable than the former. But the roots of both sorts have been used as anthelmintics from the time of Galen, or earlier, to the present. The large root of the male fern, together with its appendages, are to be reserved for use, first cutting off the two ends, the one being too old and spongy, the other too new and green. They ought also to be used soon after they are taken out of the ground: being sliced, they are brought to a state fit for reducing into powder, by drying them before the fire.

some of the principal physicians at Paris. The following has been published as the mode of its exhibition. After the patient has been prepared by an emollient clyster, and a supper of panada with butter and salt, he is directed to take in bed in the morning, a dose of two or three drachms of the powder of male fern root. The dose to infants is only one drachm. The powder must be washed down with a draught of water, but nothing else must be taken till two hours after, when a bolus of calomel, joined with some of the stronger cathartics, is to be given. If this does not operate, it must be followed by a dose of purging salts.* By this method, the worm is commonly expelled in a few hours. If the first trial does not succeed, the process must be repeated at due intervals.

COUHAGE; OR, COW-ITCH.

THE stiff hairs which cover the ripe pods are directed to be dipped in syrup or molasses, and scraped off with a knife; they occasioning an intolerable itching when applied to the skin. When

* Duncan advises the adult patient to swallow two or three large spoonfuls of fresh castor oil, or get a clyster of the same.

Olive oil taken fasting for several mornings, (occasionally introducing a brisk mercurial purgative,) is recommended against the different kinds of worms; and particularly when given as a clyster, for destroying the ascarides, a small short worm, that have usually their seat in the rectum.

the syrup is rendered by the hairs as thick as honey, it is fit for use. It acts mechanically as an anthelmintic, occasions no uneasiness in the primæ viæ, which are defended by mucus, and may be safely taken from a tea-spoonful to a table-spoonful in the morning fasting. The worms are said to appear with the second or third dose; and by means of a purge, in some cases, the stools have consisted entirely of worms.

Couhage is equally deleterious to the different species of worms.—For a further account of worm medicines, see *Symptoms and Treatment of Worms*.

DIGITALIS;—OR, FOX-GLOVE.

ACCORDING to Duncan, its effects, when swallowed, are,

1. To diminish the frequency of the pulse.
2. To diminish the irritability of the system.
3. To increase the action of the absorbents.
4. To increase the discharge by urine.

In excessive doses, it produces vomiting, purging, dimness of sight, vertigo, delirium, hiccough, convulsions, collapse, and death. For these symptoms, the best remedies are cordials and stimulants.

Internally, digitalis has been recommended,

1. In inflammatory diseases, from its very remarkable power of diminishing the velocity of the circulation.

2. In active hæmorrhagies, in phthisis.
3. In some spasmodic affections, as in spasmodic asthma, palpitation, &c.
4. In mania, from effusion on the brain.
5. In anasaruous and dropsical effusions.
6. In scrophulous tumours.
7. In aneurism of the aorta, we have seen it alleviate the most distressing symptoms.

Externally it has been applied to scrophulous tumours.

It may be exhibited,

1. In substance, either by itself, or conjoined with some aromatic, or made into pills with soap or gum ammoniac. Withering directs the leaves to be gathered after the flowering stem has shot up, and about the time when the blossoms are coming forth. He rejects the leaf-stalk, and middle rib of the leaves, and dries the remaining part, either in sunshine or before the fire. In this state they are easily reduced to a beautiful green powder, of which we may give at first, one grain twice a day, and gradually increase the dose until it act upon the kidneys, stomach, pulse, and bowels, when its use must be laid aside or suspended.

2. In infusion. The same author directs a drachm of the dried leaves to be infused for four hours in eight ounces of boiling water, and that there be added to the strained liquor an ounce of any spirituous water, for its preservation. Half an ounce or an ounce of this infusion may be given twice a day.

3. In decoction. Darwin directs that four ounces of the fresh leaves be boiled from two pounds of water to

one pound, and half an ounce of the strained decoction be taken every two hours, for four or more doses.

4. In tincture. Put one ounce of the dried leaves coarsely powdered into four ounces of proof-spirit, (diluted alcohol;) let the mixture stand by the fire-side twenty-four hours, frequently shaking the bottle; and the saturated tincture, as Darwin calls it, must then be separated from the residuum by straining or decantation. Twenty drops of this tincture may be taken twice or thrice a day. The Edinburgh College use eight ounces of diluted alcohol to one of the powder, but let it digest seven days.

5. The expressed juice and extract are not proper forms of exhibiting this very active remedy.

When the digitalis is disposed to excite looseness, opium may be advantageously conjoined with it; and when the bowels are tardy, jalap may be given at the same time, without interfering with its diuretic effects. During its operation in this way, the patient should drink very freely.

We also extract the following from Dr. Ferriar's Essay on the Medical Properties of Digitalis:—

That to one patient half a grain may be a full dose; to another six or eight grains may be given, not only without inconvenience, but without producing any sensible effect. These varieties of sensibility and habit can only be known by beginning with the lowest dose, and increasing it with the most scrupulous care. That I might arrive with more certainty at a knowledge of the ordinary doses, I have, since the publication of my first cases, invariably given the powder of the dried leaves, in substance, as the preparation least liable to difference of strength. I have begun the use of the digitalis with impunity in so many cases, in doses of half a grain, that

I take no other precaution than that of joining an equal quantity of opium with it at first, to lessen the chance of nausea. I exhibited it at first chiefly in cases of active hæmorrhage, and with very general success. In confirmed consumption, I joined with it myrrh and salt of iron; and though it relieved the cough and dyspnæa, and diminished the frequency of the pulse, when opium and digitalis had produced but little effect, yet, from the extensive mass of disease generally apparent in inspecting the lungs of phthisical subjects, and the strange formation of new morbid parts discoverable in it, I did not suppose that many cases of confirmed consumption (notwithstanding it alleviates) would be cured by it. The dose of the salt of iron was generally five grains repeated four times a day.

Dr. Ferriar also strongly recommends the fox-glove in spasmodic asthma, coughs of long standing, palpitations of the heart, dropsy, &c.—See his *Essay*, published by Cadell and Davies.

HEMLOCK*;—THE LEAF, FLOWER, AND SEED.

FRESH hemlock contains not only the narcotic, but also the acrid principle; of the latter much,

* The true hemlock, *cicuta*, or *conium maculatum* of *Linneus*; has a very nauseous smell, like that of mice; or, according to Duncan, it resembles the urine of a cat; and which, with the following botanical description, will readily distinguish it from other plants of the same natural order, that are either more virulent, or less active, and which might otherwise be easily confounded: hemlock is a tall umbelliferous plant, with large leaves, of a blackish green colour on the upper side, and a whitish green underneath, divided into a number of small oblong (somewhat oval) segments, which stand in pairs

and of the former little, is lost by drying. The whole plant is a virulent poison, but varying very much in strength according to circumstances. When taken in an over dose, it produces vertigo, dimness of sight, difficulty of speech, nausea, putrid eructations, anxiety, tremors, and paralysis of the limbs. But Dr. Storck found, that in small doses it may be taken with great safety; and that, without at all disordering the constitution, or even producing any sensible operation, it sometimes proves a powerful resolvent in many obstinate disorders. In scirrhus, the internal and external use of hemlock has been found useful, but then mercury has been generally used at the same time. In open cancer, it often abates the pains,

on middle ribs: these segments are again deeply cut, but not quite divided, on both sides; and many of these ultimate sections have one or two slighter indentations. The stalk is round, smooth, hollow, irregularly variegated with spots and streaks of a red or blackish purple colour. The flowers are white; the seeds greenish, flat on one side, very convex, and marked with five furrows on the other. The root is oblong, about the size of a middling parsnep, yellowish without, white and fungous within. The plant is annual or biennial; common about the sides of fields, under hedges, and in moist shady grounds; the stalk is often three, four, and even more than six feet high; it flowers in June and July, when the leaves should be collected: they are to be picked off, and the foot stalks thrown away. The leaves are then to be dried quickly in a hot sun, or rather on tin plates before a fire, and preserved in bags of strong brown paper, or powdered and kept in close vessels excluded from the *light*; for the light soon dissipates their green colour, and with it the virtues of the medicine.

and is free from the constipating effects of opium. It is likewise used in scrophulous tumors and ulcers, and in other ulcers that are only defined by the term ill-conditioned. It is also recommended by some in chin-cough, and various other diseases. Its most common and best form, is that of the powdered leaves, in the dose at first of two or three grains a day, which in some cases has been gradually increased to upwards of two ounces a day, without producing giddiness. An extract from the seeds is said to produce giddiness sooner than that from the leaves.

In the first volume of the Medical Commentaries, it is asserted, that the extraet prepared from the seeds of hemlock, has been observed to be much more powerful than that from the leaves.

Extract, or inspissated juice of Hemlock.—Bruise the fresh leaves and stalks of hemlock, gathered when the flowers are just appearing, and including them in a hempen bag, squeeze out their juice in a press; let it stand six hours until the feces subside, then reduce the decanted juice to dryness in a water bath: London and Dublin Colleges. That of Edinburgh, directs the evaporation to be continued till it acquires the consistence of pretty thin honey; when it is cooled, add of the powder of the dried leaves, as much as is sufficient to make it of a consistence fit for forming pills. Care, however, is to be taken, that the evaporation proceed only to such length, that as much of the powder can be mixed with the in-

spissated juice as shall make up about a fifth part of the whole mass.

Dr. Latham, in the seventh edition of the London Pharmacopœia, remarks, that

Considerable care is required in preparing the inspissated juice of hemlock. Besides the precaution of gathering the plant at the proper season, and preventing the mixture of any other vegetable, the evaporation should take place as soon as possible after the expression; and therefore the juice should not be bought, already expressed, from a gardener,—as has been too often done. For if, as Lewis observes, this expressed juice, which retains the smell of the plant, be suffered to settle until it becomes clear, it loses nearly all the specific flavour of the hemlock; the odorous principle seeming to separate and subside with the herbaceous feculencies: moreover, if the opinion of Storck, who imputes its sometimes failing of success to a too great dissipation of its volatile parts by an hasty evaporation, be as well founded as is generally believed, the evaporation should be slow. It were to be wished that the degrees of inspissation, both of juices and extracts, could always be determined with precision. In the inspissation, however, of this juice, the consistence intended is such as is proper for forming it into pills; which it may be, with proper attention, and its strength rendered more constantly uniform, than by adding a quantity of the powdered leaves, as Storck directed, and as it is still ordered in the Edinburgh Dispensatory.

In confirmation of the above observations, Dr. Withering says, no medicinal plant, when collected, is more apt to heat and ferment than hemlock; which, if it does, the quantity of extract is much less, and its properties greatly impaired, and that, if the feculencies are thrown away, the medicine is spoiled.

It is generally given cautiously at first, viz. in doses from a grain or two to five grains, in a day, to adults, and augmented gradually. Sometimes several drachms

have been given in that space without producing giddiness. But Dr. Withering says, from gr. v. to gr. x. of extraet, duly made, are a proper dose, and that few constitutions will bear more without experieneing disagreeable effects.

For the different formulæ, &c. of hemlock, for external purposes,—See *Appendix to Surgery*.

BLACK HENBANE;—THE HERB, SEEDS, AND LEAVES.

WHEN taken to any great extent, they produce the most alarming effects. They give the appearances of intoxication, attended with wild delirium, remarkable dilatation of the pupils of the eyes, and convulsions. It often produces sweat, sometimes an eruption of pustules over the surface, and generally sound sleep, succeeded by serenity of mind, and recruited vigour of the body: but like the other narcotics, instead of these, it sometimes gives rise to vertigo, head-ach, and general uneasiness. With particular individuals it occasions vomiting, colic pains, a copious flow of urine, and sometimes purging. Upon the whole, like opium, it is a powerful anodyne; and like hemlock, it is free from any constipating effect, having rather a tendency to move the belly.

From these effects, it is not surprising that henbane should have been introduced into the practice of medicine; and accordingly, it appears to have been used both externally and internally for

a variety of purposes. Several different species of henbane were formerly employed. Celsus, in particular, was very fond of this medicine; he used it externally as a collyrium in cases of ophthalmia: he employed it topically for allaying the pain of tooth-ach; and he gave it internally, both with the view of mitigating other pains, and of producing quiet sleep.

For a considerable length of time, however, henbane fell almost into disuse; but the employment of it has of late been revived by Dr. Storck; and it has been used both by him, and by many other practitioners in those cases where an anodyne is requisite, and where an objection occurs to the use of opium. It is employed for resolving swelling, and allaying pain in cases of seirrhus, under the form of cataplasm of the leaves, or of a plaster made from the oil* of the seeds and powder of the herb, with wax, turpentine, and other articles; or of ointment made of the powder of the leaves with hog's lard. In open ulcers, the powder of the leaves, sprinkled on the part, has often a good effect.

An extract from the leaves, or from the seeds, is the form in which it is given internally; but contrary to what happens with hemlock, the former appears to be the most powerful. This extract has been given with advantage in a variety of nervous affections, as mania, melancholia, epi-

* When however the sedative power of henbane is wanted under the form of oil, it may be best obtained by boiling the bruised leaves in olive oil.

lepsy, hysteria, &c.; in glandular swellings, in obstinate ulcerations; and in every case where it is necessary either to allay inordinate action, or mitigate pain. In accomplishing these ends, it is often no less useful than opium; and it frequently succeeds where opium produces very disagreeable effects. The dose of this extract must be accommodated to the circumstances of the case and of the patient; and it has been increased from half a grain to half a drachm in the day; for, like opium, its influence is very much diminished by habit.

The *roots* are used for anodyne necklaces.

DEADLY NIGHTSHADE;—THE LEAVES AND ROOT.

THE whole plant is poisonous, and the berries, from their beautiful appearance, have sometimes proved fatal to children. The symptoms excited are, a dryness of the mouth; a trembling of the tongue; a very distressing thirst; a difficulty of swallowing; fruitless efforts to vomit; and great anxiety about the præcordia. Delirium then comes on, with gnashing of the teeth and convulsions. The pupil remains dilated, and is not sensible even to the stimulus of light. The face becomes tumid, and of a dark red colour. The jaws are frequently locked. Inflammation attacks the œsophagus, stomach, and intestines, sometimes extending to the mesentery, lungs, and liver, accompanied with violent pains in the abdomen. The stomach is very insensible to stimulus, and the

peristaltic motion of the intestines is destroyed. General relaxation, palsy especially, of the lower extremities, convulsions, vertigo, blindness, coma, and death,* succeed. The body soon putrifies, swells, and becomes marked with livid spots; blood flows from the nose, mouth, and ears; and the stench is insufferable. On dissection, the blood is found to be fluid, the intestines are inflated and inflamed, or eroded and gangrenous. The best method of cure is to excite vomiting as soon as possible, by emetics and tickling the fauces; to evacuate the bowels by purgatives and elysters; and to give largely, vinegar, honey, milk, and oil. In some children who recovered by this treatment, the delirium was succeeded by profound sleep, accompanied with subsultus tendinum; the face and hands became pale and cold, and the pulse small, hard, and quick. Their recovery was slow, and the blindness continued a considerable time, but at last went off.

Yet this virulent poison, under proper management, may become an excellent remedy. Besides a very remarkable narcotic power, it possesses considerable influence in promoting all the excretions, particularly by sweat, urine, and, it is also said, by saliva; but its exhibition requires the greatest caution; for it is apt, when continued for any length of time, even in small doses, to cause

* When the accident is discovered in time, a glass of warm vinegar will prevent this effect.—See *Treatment of Vegetable Poison*.

dryness and tension of the throat and neighbouring parts, vertigo, dimness of sight, and even temporary blindness. When any of these symptoms occur, its use must be suspended for some time, and afterwards resumed in smaller doses.

Deadly nightshade has been exhibited

1. In several febrile diseases; in obstinate intermittents; and in the plague.

2. In inflammations; the gout.

3. In comatose diseases; in palsy and loss of speech from apoplexy.

4. In spasmodic diseases; in chorea; epilepsy; chincough; hydrophobia; melancholy, and mania.

5. In cachectic affections; in dropsies, and obstinate jaundice.

6. In local diseases; in amaurosis; in scirrhus, and cancer.

It is best exhibited in substance, beginning with a very small dose of the powdered leaves or root, such as the fourth or eighth part of a grain for children, and one grain for adults, to be repeated daily, and gradually increased. In hydrophobia, Munch gave the powdered root every second morning, to the extent of from one to five

grains to children, and fourteen or fifteen grains to adults.

The watery infusion is also a powerful remedy. One scruple of the dried leaves is infused in ten ounces of warm water, and strained after cooling. At first two ounces of this may be given daily to adults, and gradually increased until the tension of the throat shews that it would be imprudent to go further.

The watery extract is not a judicious preparation.

Externally, the powdered leaves are applied as a narcotic to diminish pain, and to cancerous and ill-conditioned sores. From its effect in permanently dilating the pupil, Professor Reimarus proposed, and tried with success, the dropping a little of the infusion into the eye, a few hours before performing the operation for the cataract, with the view of facilitating the operation.

WOODY NIGHTSHADE;—OR, BITTERSWEET.*—
THE TWIGS.

A tincture made by digesting four ounces of the bruised twigs in a quart of white wine, has been recommended in different disorders as a resolvent

* In a medical dissertation on this plant, printed at Upsal, a light decoction or infusion of the stalks is said to have been frequently employed with success in violent ischiadic and rheumatic pains. The efficacy of the woody nightshade in the jaundice, scurvy, suppressed menses, and the lues venerea, is also mentioned by

or deobstruent : its sensible operation is by stool ; the dose is from three to six ounces. An extract is sometimes prepared. Experience has shown that this plant is by no means so deleterious as either the deadly or the garden nightshades ; that it acts more regularly and uniformly : and that, without occasioning nervous complaints, it produces more considerable evacuations, especially by stool ; but its virtues in particular cases have not yet been sufficiently ascertained.

Dr. Althoff (who has published an essay on the virtues of bitter sweet,) and Dr. Critchon recommend this plant in obstinate diseases of the skin ; particularly in the true lepra, and in cases analogous to the itch, but not the true itch. A decoction is directed to be made by boiling one ounce of the twigs in one pint and a half of water down to a pint ; of which, two ounces at first, is given in the morning, noon, and evening ; afterwards, a pint is taken every day. To very delicate persons, and hysterical women, it often occasions syncope and slight palpitations of the heart, now and then nausea and giddiness : these symptoms show the dose is too large, and if a smaller quantity be given, and any aromatic tincture added to

other authors. It is perennial, grows by the sides of ditches, and in moist hedges, with winding, woody, but brittle stalks ; it flowers in June or July, the flowers are in clusters, and of a blue colour ; the berries red. The roots and stalks impress, on first chewing them, a considerable bitterness, which is soon followed by an almost honey-like sweetness.

it, as the compound tincture of lavender, it ceases to produce such uneasy symptoms. They order the patient at the same time to wash his skin with a stronger decoction, which greatly accelerates the cure.

As to rheumatism, for which it has been greatly praised, Dr. Critchon says he has not found it at all equal to the remedies which are generally employed. Dr. Alti. off says, that out of twenty-three cases of *lepra græcorum*, in which he tried it, two only resisted its action. All the others were completely cured.

GERMAN LEOPARD'S-BANE;—THE FLOWER, HERB,
AND ROOT.

THE flowers possess very beneficial effects, in raising the pulse, in exciting the action of the whole sanguiferous system, in checking diarrhœas, in promoting expectoration, and, most particularly, in removing paralytic affections of the voluntary muscles; but their use is frequently attended with no sensible operation, except that in some cases of paralysis, the cure is said to be preceded by a peculiar prickling, and by shooting pains in the affected parts. When given improperly or in too large doses, they excite an insupportable degree of anxiety, shooting and burning pains, and even dangerous hæmorrhagies, vomiting, vertigo, and coma. For these dangerous symptoms, vinegar is said to be the best remedy.

They have been recommended,

1. In paralytic disorders, in chronic rheumatism, in retention of the urine from paralysis of the bladder, in amaurosis.

2. In intermittent fevers,* combined with Peruvian bark.

3. In dysentery and diarrhœa, but in some cases they have had bad effects.

4. In putrid diseases.

* Dr. Askow, physician to the *late* Danish navy, has used the *herb* with success in intermittents; he directed an infusion of half a handful in half a pint of small beer, to be taken warm two hours before the paroxysm—it vomited plentifully. He adds, that the fear of its doing harm, from the violence of its effects, is much lessened by the successful use made of the infusion, as common drink, in wounds of the cavities of the breast, particularly by Schmucker, principal surgeon of the armies of the late and present King of Prussia.

Dr. Collin earnestly recommends the *flowers* in paralytic and spasmodic cases, believing them to act, in some peculiar manner, on the whole nervous system; he directs the evacuations previously proper in certain habits, at intervals during their use. He gave an infusion of from one to three drachms of the flowers in a pint of water, or from one to two drachms in powder, mixed with honey into an electuary, either of which was the quantity for a day.

The dried *root* powdered, is employed in dysentery, either alone or joined with other remedies. The dose is from five to ten grains. It is more apt to excite vomiting than either the herb or the flowers.

5. In typhoid inflammations.

6. To promote the uterine discharge.

7. And in internal pains, and congestions from bruises. In the countries where they are indigenous, the flowers of the leopard's-bane have long been a popular remedy in these accidents.

They are contra-indicated by an inflammatory diathesis, a predisposition to hæmorrhagies, and internal congestions.

The flowers should be wrapt up in a piece of linen, as otherwise their down is apt to be diffused in the liquid, and to cause violent irritation of the throat. Duncan orders one or two scruples, infused in a pint of water, to be taken in the course of the day.

LARGE BLUE WOLFSBANE; OR, MONK'S-HOOD.

THE fresh plant and root are very violent poisons, producing remarkable debility, paralysis of the limbs, convulsive motions of the face, bilious vomiting, and catharsis, vertigo, delirium, asphyxia, death. The fresh leaves have very little smell, but when chewed have an acrid taste, and excite lancinating pains, and swelling of the tongue. By drying, its acrimony is almost entirely destroyed.

For medical use the plant must be gathered before the stem shoots.

When properly administered, it acts as a penetrating stimulus, and generally excites sweat, and sometimes an increased discharge of urine.

On many occasions, it has been found a very effectual remedy in glandular swellings, venereal nodes, anchylosis, spina ventosa, itch, amaurosis, gouty and rheumatic pains, intermittent fevers, and convulsive disorders.

It is commonly used in the form of an inspissated juice. As soon as the plant is gathered, the juice is expressed, and evaporated without any previous clarification, to the consistence of an extract. It is an unfortunate circumstance, that the powers of this medicine vary very much, according to its age and the heat employed in its preparation. When recently prepared, its action is often too violent, and when kept more than a year, it becomes totally inert. It may therefore be laid down as an universal rule, in the employment of this and of many other similar active medicines, to begin with very small doses, and to increase them gradually to the necessary degree; and whenever we have occasion to begin a new supply of the medicine, we should again commence with the smallest dose, and proceed with the same caution as at first.

We may begin by giving half a grain of this extract, either formed into a powder with ten grains of white sugar, or made up with any convenient addition into a pill, twice or thrice a day, and gradually increase the dose; or a tincture of it may be prepared by digesting one part of the

dried leaves in six parts of spirit of wine; the dose of which will be at first five or ten drops, and may be gradually increased to forty.

GINSENG, AND LIQUORICE;—THE ROOTS.

GINSENG is said to be the root of a small plant growing in the woods of China and Chinese Tartary. It is also found in some parts of North America: the Chinese, probably on account of its scarcity, have a very high opinion of its virtues, so that it sells for many times its weight of silver; they consider it as an universal restorative in all decays from age, intemperance, or disease: it enters a part of most of the medicines employed for the Mandarins. It has been given successfully in repeated doses of one scruple, in a convulsive case: Ginseng is esteemed as a gentle and agreeable stimulant, and sometimes used as a restorative after fatigues of body or mind. The Americans disregard it, probably on account of its growing plentifully in their woods: its taste is more agreeable than that of liquorice, though somewhat similar.

Liquorice is an useful pectoral and detergent; it softens acrimonious humours, and allays thirst: it is an ingredient in several lozenges and other compounds. Our roots and extract (if properly prepared,) are far preferable to the foreign. Liquorice powder, as sold in the shops, is generally adulterated.

DANDELION AND BURDOCK;—THE ROOTS, &c.

THE expressed juice of dandelion, either alone or mixed with whey, has been given in doses of from one and a half to four ounces, three or four times a day, to correct thick, sily, blood; it is diuretic, deobstruent, and somewhat laxative. A decoction of both herb and root, is recommended in impetigo, scabies, &c. It is said that dandelion, taken every day in whey or broth, has cured diseases of the liver where other medicines failed; and when joined with cream of tartar, it often succeeded in resolving a hardness and dropsy from induration of the liver, and in stones of the kidneys, if drank every day for weeks or months; and that this regimen answers expectation in bilious calculi and ascites. A soft extract, made by inspissating a decoction of the fresh roots in water, and given from two to four tea-spoonsful every morning, is praised by Zimmerman and others, for obstructed viscera, jaundice, costiveness, and for tubercles of the lungs, scrophula, &c.

Boerhaave esteems them capable, if duly continued, of resolving almost all kinds of coagulations, and opening very obstinate obstructions of the viscera. A spirit obtained from them by distillation after previous fermentation, has been strongly recommended by Professor Delius, in asthmatic disorders, coughs proceeding from glandular obstructions, and in hydropic affections.

Burdock roots are esteemed diuretic, aperient, and sudorific; decoctions of them have of late been used in rheumatic, gouty, venereal, scorbutic, and other disorders; it is sometimes preferred to sarsaparilla. An extract is likewise prepared.—See *Appendix*.

GENTIAN;—THE ROOT.

GENTIAN possesses the general virtues of bitters in an eminent degree; it is totally devoid of astringency. It is the principal bitter now made use of by physicians; and as the intense bitters are generally admitted to be not only tonic and stomatic, but also anthelmintic, antiseptic, emmenagogue, anti-arthritic, and febrifuge, this root has a better claim to the possession of these powers than most of this kind.

Many dyspeptic complaints, though arising from debility of the stomach, are more effectually relieved by bitters than by Peruvian bark; and hence may be inferred their superior tonic powers in the organs of digestion. It is rendered more grateful to the stomach by the addition of an aromatic, and for this purpose, orange peel, &c. is employed. It is useful in gout and in general debility; in large doses, gentian evacuates the intestines; when combined with astringents, as galls, or tormentil roots, in equal parts, Dr. Cullen says, it constantly succeeded in curing intermittents, if given in a sufficient quantity. It is seldom administered in substance, because the heat neces-

sary to be applied to render it pulverizable is said to injure its virtues, It is therefore exhibited in infusion, tincture, or extract.

Compound Infusion of Gentian.—Take of gentian root, half an ounce; dried orange peel, one drachm; coriander seeds, half a drachm; proof spirit, four ounces; water, one pint. First pour on the spirit, and three hours afterwards add the water; then macerate without heat, for twelve hours; and strain.—*Edin. Dis.*

The London and Dublin Colleges directs the fresh outer rind of lemon peel as well as that of the orange, to be used, and omit the coriander; the former also directs the infusion to be made with water only. These two colleges also order their infusions to be made in *hot* water, and to macerate for an hour only. The spirit is an useful addition, as it not only keeps the infusion longer from spoiling, but promotes the extraction of the virtues of all the ingredients. *Dose*: From one to three ounces.

Compound Tincture of Gentian; or Stomachic Elixir.—Take of gentian root, two ounces; dried Seville orange peel, one ounce; canella alba, half an ounce; cochineal, half a drachm; proof-spirit, two pints and a half; macerate for eight days, and strain.—*Edin. Dis.*

The London and Dublin Colleges omit the cannella and cochineal, and use instead, half an ounce of cardamom seeds. They also make

use of two pints only of the proof-spirit to the same quantity of the gentian, &c. Dose: From one to four tea-spoonsful.

The dose of the extract of gentian is from half a scruple, to two scruples.

TORMENTIL—Or, SEPTFOIL; THE ROOT.

It is one of the most agreeable and efficacious of the vegetable astringents, and is made use of with good effect in all cases where medicines of this class are proper, and is more particularly adapted to those cases where the heating stimulating astringents would be injurious, such as phthisical and bloody diarrhœas, &c. It is an ingredient in the London compound powder of chalk. The dose of the powdered root is from a scruple to three scruples. It is generally given in decoction: an ounce and a half of the powdered root may be boiled in three pints of water to a quart, adding, towards the end of the boiling, a drachm of cinnamon; of the strained liquor, sweetened with an ounce of any agreeable syrup, two ounces or more may be taken four or five times a day.

ROSE LEAVES.—RED AND DAMASK.

THE infusion of roses is thus prepared: take of red rose-buds, freed from the white heels, half an ounce; weak vitriolic acid, three drachms; re-

finer sugar, one ounce and a half; boiling water, two pints and a half. First, mingle the vitriol with the water, in a china, glass, or stone-ware vessel, and in this mixture infuse the roses. When the liquor is become cold, strain, and add the sugar. This is a very useful and grateful medicine in hæmorrhagies, in hectic and all cases which require mild coolers and sub-astringents; it is often taken with the bark, &c.; it likewise makes a good gargle, for which purpose the honey of roses is also joined with it.

Conserve of Red Roses.—The fresh buds, elipt from their white heels, and beaten with thrice their weight of refined sugar, form an agreeable and useful conserve; which is generally used from two to four drachms, taken in warm milk, in weaknesses of the stomach, coughs, and phthisical complaints.*

Syrup and Honey of Roses.—Six pounds of refined sugar, or seven pounds of clarified honey, are boiled to a syrupy consistence, with an infusion made from seven ounces of the dried rose buds, in five pints of boiling water. The syrup is valued chiefly for its gratefulness and fine red

* Hoffman, Riverius, &c. have published accounts of cases of cure in consumptions, performed by the continued use of this conserve; some of their patients having taken twenty, others thirty pounds and upwards, in the space of a month. They also direct the use of the sugar and lozenges of the rose.—See *Catechu*, &c.

colour: the honey is used as a mild cooling detergent, particularly in gargarisms for inflammations and ulcerations of the mouth and tonsils.

Damask Rose Water.—Six pounds of the fresh leaves of this or any other kind of rose, impregnate a gallon or more of water strongly with their fine flavour. On distilling large quantities, there separates a small portion (scarcely half an ounce, from an hundred weight of the flowers) of essential oil, which besides its chief use as a perfume, is recommended as an excellent cordial for raising the spirits and allaying pain.

Purging Syrup of Roses.—Take of dried damask rose leaves, seven ounces; refined sugar, six pounds; boiling water, four pints; macerate the leaves in the water for twelve hours, then add the sugar that it may be made into a syrup. It is an agreeable and mild purgative for children, in doses of a desert spoonful or more, and it is given to adults as a gentle laxative.

The infusion is sometimes mixed with brown sugar or honey, for clysters: a solutive extract may likewise be made from the infusion.

HIPS AND QUINCES.

HIPS are said to have a greater degree of laxative virtue than that of the damask rose, together with a mild corroborating or restringent quality.

The fruit, the only part of the dog-rose made use of in medicine, is recommended in bilious fluxes, sharpness of urine, and hot indispositions of the stomach: the fresh pulp is made into a conserve, by mixing three ounces of it with five of fine sugar. The pulp must be separated with great care from the rough prickly matter which incloses the seeds.

Quinces have an austere taste: taken in small quantities they are supposed to restrain vomiting and alvine fluxes; and more liberally to loosen the belly. *Mucilage of quince seeds*: take of quince seeds, one drachm; distilled water, half a pint; boil with a slow fire until the matter thickens, then pass it through linen. This mucilage has an agreeable smell and taste, more grateful than that prepared from the gums, &c.; but in keeping in its soft state, it sooner becomes mouldy. It is useful to allay coughs, and may be made into a linctus with conserve of hips, syrup of white poppies, or simple oxymel; or, if required to promote expectoration, with the oxymel or syrup of squills. Aged persons may also advantageously take between-whiles the compound tincture of opium (paregoric elixir) in barley water, or almond milk, &c. This mucilage is likewise used when mixed with honey of roses, for sore throats, or ulcerations in the mouth and throat; and with the addition of borax, for the thrush in children, &c. Externally, the mucilage of quince seed is a proper application for chapped lips and nipples, ulcera-

tions of the eye-lids and other parts, arising from acrimony of the humours, and for slight burns and scalds.

ANGUSTURA BARK.

IN large doses it is apt to occasion nausea, or to purge; but in smaller ones, it sits easy on the stomach, and is free from that common inconvenience of the bark, of causing a sense of weight and fullness. Indeed, the efficacy of moderate doses is a peculiar advantage of the Angustura bark; from ten to twenty grains of the powder, alone, or occasionally with rhubarb, magnesia, or prepared chalk, or from two to four spoonsful of the infusion or decoction, with one or two teaspoonsful of the tincture, having been found sufficient, a few times repeated, to prevent the paroxysms of an intermittent. In diarrhœas and dysenteries, after the due exhibition of laxatives, its effects are usually very speedy. It has been found very effectual in low or nervous fevers, and in the irregular intermittents of children, usually termed worm fevers. Dr. Pearson and others, regard it as a general tonic, and compare it to the warm bitters, such as camomile, but superior to every other medicine of that class. It increases the appetite for food, removes flatulence and acidity arising from dyspepsia, and is a very effectual remedy in diarrhœa from weakness of the bowels, and in dysentery. In intermittents it is inferior to the Peruvian bark. A watery extract

is prepared; and an essential salt or volatile extract may also be procured from this and the other barks by the same process as it was first obtained by the French Count de la Garraze, from the Peruvian bark.*

ELM;—THE INNER BARK.

THE complaints for which it is chiefly recommended, are those of the cutaneous kind allied to herpes and lepra. Dr. Lyons, who first recommended it, mentions five cases of inveterate eruptions, both dry and humid, or those forming incrustations, which were successfully treated by a decoction of this bark, but as he added nitre to the decoction, and also frequently had recourse to purgatives, it may be doubted whether these cures

* This essential salt is obtained from a cold infusion of the bark carefully evaporated to a state of dryness, by so gentle a heat that its volatile particles may not be dissipated or injured; and in order to render its exposure even to this gentle heat as short as possible, the evaporation is directed to be performed on a wide surface, as a large earthen plate; and when reduced to a perfect state of dryness, it should not be thicker than thin glass, and nearly as transparent. A pound of pale bark yields about nine drachms of this salt, ten grains of which, it is said, are equivalent to a drachm of the powder. The dried precipitate from the decoction of bark, (see page 33) procured by boiling it for ten minutes only, in a close vessel, may probably be a more efficacious and economical preparation. The decoction may afterwards be evaporated in a water bath, to the consistence of a soft or hard extract.

ought to be wholly ascribed to the elm bark. Other authorities confirm its utility in cutaneous diseases. In very obstinate cases, it is necessary to persevere in the use of the decoction for some months. Where it succeeds, it generally at first increases the efflorescence. Doctor Lysons directs the decoction to be made by boiling four ounces of the bark next the wood, taken fresh from the tree,—in spring from the small, not smallest branches,—in autumn from the branching roots,—in four pints of water to two pints. **DOSE:** half a pint, two or three times a day.

BITTER DAMSON, AND SLOES.

THE bark of the bitter or mountain damson, is the part used, it is taken both from the trunk and root of the tree: its virtues seem more perfectly extracted by cold than boiling water. After being long used in Guiana, as a medicine in alvine fluxes and hæmorrhagies, it was brought into France in 1713, and in an epidemic dysentery, which raged at Paris in 1718, neither yielding to purgatives nor astringents, and said to be made worse by ipecacuan, this bark was given with success. It has also been effectually used at Nimeguen in 1736; but the cure was more speedy and certain in fluxes of blood, and bloody matter, than when the discharges were bilious; and from the experiments of Jussieu, during fifteen years, it appears to have been successful not in dysenteries only, but in chronical diarrhæas of

several species. It was used with success also in an habitual dysenteric colic, in a chronical hepatic flux, in a lientery, in leucorrhœa, and for worms. It is given in powder, from half a scruple to half a drachm, or more, several times a day; but it is best used in decoction, which, if taken in too large a dose, neither excites nausea or vomiting; whereas the powder sometimes disagrees with the stomach. It is adviseable to begin with a weaker decoction, and so gradually proceed to a stronger; a decoction is directed to be made by boiling two drachms of the bark in two quarts of water to two thirds, and then divided into four doses, one of which is to be taken every three hours. In some cases evacuants of the primæ viæ are previously necessary, in others, bleeding, &c.*——See *Pringle, Brocklesby, Monro, Lind, &c. on Diseases of the Army and Navy.*

Slocs.—The juice expressed from them while unripe, or before they are mellowed by the frost, and inspissated by a gentle heat to dryness, is called German acacia, and is usually sold for the Egyptian juice. A conserve of this fruit is pre-

* Dr. Huek Saunders, and others, use this bark in old and obstinate diarrhœas, and dysenteries, especially those brought from warm climates. Cullen observes he can find nothing in this bark but that of a simple bitter, and that the virtues ascribed to it in dysentery have not been confirmed by experience; he prefers to it an infusion of camomile flowers as a more useful remedy.—Duncan says it is doubtful that it is better than other bitters.

pared by mixing the pulp with thrice its weight of refined sugar : the sloes being previously steeped in water over the fire, with care that they do not burst, till they are sufficiently softened to admit of the pulp being pressed out through a seive. In some places, the unripe sloes are dried in an oven, and then fermented with wines or malt liquors, for an astringent diet in alvine and uterine fluxes.

The bark, both of the branches and of the roots, is said to have been given with success in intermitting fevers, and by some stands recommended as equal to the Peruvian bark. It is apparently a strong styptic, and its styptic matter is of that kind which is not easily extracted by water.

The flowers, in smell are very agreeable, and in taste bitterish, have a laxative virtue, like those of the peach tree or the damask rose ; they impregnate water, by distillation, strongly with their fragrance : and give out their active matter, by infusion, both to water and spirit. The watery infusion, sweetened with manna or sugar, or made into a syrup, is a very useful purgative for children. Dr. Withering recommends the tender leaves, properly dried, as a good substitute for tea. The fruit, bruised and put into wine, gives it a beautiful red colour, and a pleasant sub-acid roughness. Letters written upon linen or woollen with the juice of this fruit will not wash out. Cullen considers it as an agreeable and useful astringent.

WHITE HOREHOUND, AND PLANTAIN.

THE leaves of horehound are aperient and corroborant; they are recommended in humoral asthmas, obstinate coughs, and in menstrual suppressions, cachexies, and other chronical disorders, proceeding from a viscosity of the fluids and obstructions of the lungs and other viscera: a drachm of the dry leaves in powder, or two or three ounces of the expressed juice, or an infusion of half a handful of the fresh leaves are commonly directed for a dose. An extract and lozenges of horehound are prepared by the author.

Plantain—The leaves and seeds are recommended as vulneraries in phthisical complaints, spitting of blood, alvine fluxes, &c. the leaves are in some places, the usual application made by the common people to slight wounds; their expressed juice, depurated by settling and straining, or clarified with white of eggs, and inspissated to the consistence of honey, discovers a considerable saline austerity: it is restringent and corroborant. An ounce or two of the expressed juice may be given for a dose, in agues, at the commencement of the fit. The roots have also been recommended for the cure of tertian intermittents.

The juices of plantain and horehound, mixed, are a remedy of great repute in America against the bite of the rattle-snake. Two ounces or more is administered at short intervals; and, at the

same time the wounded part is covered with a cataplasm of the same herbs bruised. The good effects are said to be speedy, and the recovery of the patient complete and certain.

HORSE RADDISH, MUSTARD, AND GARLIC.

FRESH horse raddish roots are moderately stimulating, aperient, and antiseptic: they sensibly promote perspiration, urine, the expectoration of viscid phlegm, and excite appetite when the stomach is weakened or relaxed, without being so liable to produce immoderate heat, or inflammatory symptoms as the aromatics or spices. It is chiefly used in paralytic and rheumatic complaints, in scurvies, and scorbutic impurities of the humours, in cachectic disorders, and in dropsies; particularly in those which follow intermittent fevers. Taken in considerable quantities, it provokes vomiting. Bergius has directed this root to be cut without bruising, into very small pieces; and these, if swallowed without chewing, he says, may be taken down to the quantity of a table spoonful; and continued every morning for a month together, has been found extremely useful in arthritic cases; probably of the rheumatic kind. Horse raddish* appears to agree

* Dr. Withering advises as one of the best *cosmetics*, an infusion of this root in milk. Another innocent preparation for clearing the skin of pimples and recent eruptions, if assisted by gentle and cooling aperient

in virtue, &c. with those of scurvy-grass and cresses; its pungency is totally lost by drying.

Mustard Seed is one of the strongest of the pungent, stimulating, diuretic medicines that operate without exciting much heat. It is sometimes taken unbruised, to the quantity of a spoonful at a time, in paralytic, cachectic, and serous disorders. In this manner of exhibition, it generally opens the body; whereas the powder is apt to occasion vomiting, in which intention it is sometimes given in warm water, of which, repeated draughts must be drunk, to continue the effect. It is applied also as an external stimulant to benumbed or paralytic limbs; to parts affected with fixed rheumatic pains; and to the soles of the feet, in the low stage of acute diseases, for raising the pulse: in this intention, a mixture of equal parts of the powdered seeds and crumb of bread, with the addition, sometimes, of a little bruised garlic, are made into a sinapism (cataplasm) with a sufficient quantity of vinegar. Mustard seeds produce a considerable quantity of oil,* which is by

medicines, is the expressed juice of house leek, mixed with an equal quantity of cream.—Yet, all contrivances whatever, to answer this purpose, are absurd and nugatory, if the inward state of the body be neglected, or if they be looked upon as specifics of themselves.—See *Willich on Diet and Regimen*, page 74.

* This together with the oil of turpentine, is supposed to form the article called ‘*Essence of Mustard*,’ by the indiscriminate use of which, especially in acute rheumatism, and other inflammatory complaints, much mischief, (as has been justly observed by others,) may be produced.

some recommended externally against rheumatisms and palsies, though it has nothing of that quality by which the seeds themselves prove useful in those disorders; the oil being mild and insipid as that of olives, and the pungency of the seed remaining entire in the cake left after the expression.

Mustard Whey.—Take milk and water, of each a pint; mustard seed, bruised, an ounce and a half; boil them together till the curd is perfectly separated; afterwards strain the whey through a cloth.

This preparation of mustard warms and invigorates the system, and promotes the different secretions. It will often supply the place of wine in the low state of nervous fevers, and is also useful in the chronic rheumatism, palsy, dropsy, &c. It may be rendered more pleasant to the palate by the addition of a little sugar. The usual dose is an ordinary tea-cupful four or five times a day.

Garlic.—To warm and stimulate the solids, attenuate thick humours, and resist putrefaction, seem to be its primary virtues. But in hot bilious constitutions, where there is already a degree of irritation, and where the juices are thin and acrimonious, or the viscera or intestines unsound, it is apparently improper, and seldom fails to produce head-achs, flatulencies, thirst, febrile heats, and inflammatory symptoms in various shapes. In cold, sluggish, phlegmatic habits, on the other

hand, it proves a salutary and powerful corroborant, expectorant, diuretic, and, if the patient be kept warm, sudorific. In loss of appetite, and humoral asthmas, where the stomach or lungs are oppressed by viscid phlegm, this medicine has generally good effects. It has likewise been found serviceable, as a warm strengthener, in the beginning of dropsies, and for preventing a new accumulation of water after evacuation: Sydenham relates, that he has known the dropsy cured by the use of garlie alone.

Some have held it in great esteem as an antidote against the contagion of pestilential and other putrid disorders. It is used also, slightly boiled in milk, as an anthelminthic; and Hoffman looks upon it as one of the capital medicines of that class.

Both the fresh and the dry root give out their virtue to water by warm infusion. A quart of water, poured boiling hot upon a pound of the fresh roots cut in slices, and suffered to stand upon it in a close vessel for twelve hours, becomes strongly impregnated with the smell and taste of the garlic.

Vinegar and honey excellently coincide with and improve this medicine, as a detergent and deobstruent, in disorders of the breast.

The garlic itself is never to be boiled, either with vinegar or with watery liquors; the virtues of this root residing in an essential oil, which exhales along with the steam of boiling water. It may be administered in substance, and in this

way, several cloves (whole or sliced) may be taken without any inconvenience.

It is sometimes employed externally, in unguents and lotions, as an antiseptic and diseutient; and is frequently made an ingredient in the stimulating epithems, applied to the soles of the feet, in the low stage of acute distempers, for raising the pulse and relieving the head. Sydenham assures us, that none of the stimulants operate, in this intention, more powerfully than garlic; he observes, that it sometimes occasions intolerable pain, which may be relieved by a cataplasm of bread and milk. Cullen remarks, that it is not so apt to ulcerate the part as mustard; more capable of being absorbed, and extending its action to remote parts.

In deafness, cotton moistened with the juice of garlic, is introduced within the ear, and the application renewed five or six times in one day.

WAKE ROBIN;—THE FRESH ROOTS

ARE directed, when bruised and made into a conserve with three times their weight of double-refined sugar, to be taken to the quantity of a drachm and upwards. They formerly gave name to a compound powder, which is now omitted, for the above conserve, in the London Pharmacopœia. Both Sydenham and Lewis extol this medicine in rheumatic cases, particularly those of the fixed deep-seated kind. Neither wine, water,

nor spirit, extract its virtues. The recent root is a powerful stimulant and attenuant; its milky juice possesses great acrimony. The roots, when dried by *heat*, are used by the French as starch, and are also made into wholesome bread: they likewise employ the powder as a cosmetic; and it sells at a high price, under the name of *Cypress powder*. It is also made use of in washing clothes, but if not carefully dried, is apt to blister the hands.

HORSE-CHESNUT.

ON the Continent the bark of the horse-chesnut tree is held in great estimation as a febrifuge, and, upon the credit of several respectable authors, appears to be a medicine of great efficacy; and that it may be substituted for the very expensive and often adulterated Peruvian bark in every case in which the latter is indicated, with equal, if not superior advantage.

A solution of a drachm of the extract in an ounce of cinnamon water, of which sixty drops are to be given every three hours, is recommended in preference to the bark in substance.

With a view to its errhine power, the Edinburgh College has introduced it into the materia medica. As a small portion of the powder snuffed up the nostrils readily excites sneezing, even the infusion or decoction of the fruit produces this effect; it has therefore been recommended for the

purpose of producing a discharge from the nose, which, in some complaints of the head and eyes, is found to be of considerable benefit.

The fruit has been used as food for cattle, sheep, poultry, &c. ; and as soap for washing ; starch has also been made of it, and found to be very good, and when divested of its bitterness and acrimony; it probably might afford a kind of bread.

FUMITORY AND BUCKBEAN;—THE LEAVES.

FUMITORY is recommended in melancholic, scorbutic, and cutaneous disorders; for opening obstructions of the viscera, attenuating and promoting the evacuation of viscid juices, by increasing the urinary and other natural secretions. It also strengthens the tone of the bowels. Cullen says, he has found it useful in many cases in which bitters are prescribed, but its remarkable virtues are those of clearing the skin of many disorders, some of which he would call lepra. The manner of using it is by expressing the juice, and giving it to two ounces twice a day: but the virtues remain in the dried plant, so that they may be extracted by infusion or decoction in water; and the foreign dispensatories have prepared an extract of it, to which they ascribe all the virtues of the fresh plant.

Buckbean—is an efficacious aperient and deobstruent. Some recommend it in scrophulous and

other ill-conditioned ulcers : inveterate cutaneous diseases have been cured by an infusion of the leaves drank to the quantity of a pint a day at intervals, and continued for some weeks. Boerhaave relates, that he was relieved of the gout by drinking the juice mixed with whey. A drachm of the leaves in powder, purges and vomits. The extract and infusion have been recommended in intermittents, and it has lately come into use in some hydropic and rheumatic cases. It is usually joined with orange peel or some other agreeable aromatic, to alleviate their ill-taste : they are also sometimes fermented with malt liquor. Their taste is excessively bitter, and when used in brewing ale, it is said that one ounce will go as far as half a pound of hops.

RUE AND SAVIN.

RUE is powerfully stimulating and detergent, and hence is serviceable in spasmodic affections, and cases of obstructed secretions. Boerhaave is full of its praises ; particularly of the essential oil. An extract made with rectified spirit contains, in a small compass, the whole virtues of the rue ; the oil possessing only the more volatile part.

Savin—is a warm stimulating medicine, capable of producing diaphoresis, and increasing all the secretions ; but apt to excite hæmorrhagies, especially from the uterus. It is also used as an an-

thelminthic, and is said to be very efficient in the cure of gout.

Internally, a conserve of the fresh leaves is exhibited in doses of from half a drachm to a drachm; the extract from ten to thirty grains; and the essential oil, which is a very active remedy, from two to four drops or more. Savin and rue, are ingredients in the compound powder of myrrh, (see page 40.) Externally, the leaves are applied in powder or infusion, to venereal and other warts, carious bones, and old ulcers; and in cases of gangrene, psora, and tinea. An ointment of savin is by some used to promote the discharge from blisters, in the room of ointment of Spanish flies.

MINTS;—PENNYROYAL, AND ORIGANUM.

PEPPERMINT is a very useful and agreeable cordial; it is often used in hysteric depressions, flatulent colics, and other similar disorders: it seems to act as soon as taken, and to extend its effects through the whole system, instantly communicating a glowing warmth, yet not liable to heat the constitution near so much as might be expected from its pungency. Its officinal preparations are a simple and spirituous distilled waters, and an essential oil.* There is also sold, an es-

* The author, to procure the oil in its highest perfection from this plant, for his *pearls, lozenges, and essence*, finds great attention necessary, both in the cultivation and subsequent management.

sence of peppermint, which is prepared by diluting the oil with alcohol, previously coloured, with a view only to disguise it. Dose of the oil, is from one to three drops; the essence is taken from six to twelve drops; either of them may be mixed with sugar, water, weak spirit, &c.

Spearmint—is a warm stomachic and carminative, highly beneficial in loss of appetite, nausea; continual retchings to vomit, and, as Boerhaave expresses it, almost paralytic weaknesses of the stomach; few simples are, perhaps, of equal efficacy. In colic pains, and the gripes, to which children are subject, lenteries, and other kinds of immoderate fluxes, this plant frequently does good. It likewise proves serviceable in hysteric cases, and affords an useful cordial in languors and other debilities following delivery. The best preparations for these purposes are, a strong infusion from the dry leaves in water, (which is much superior to one from the green herb,) or rather a tincture or extract prepared with alcohol. These possess the whole virtues of the mint.

A conserve of the green leaves is also recommended as a stomachic, &c.

Pennyroyal—is more acrid and less agreeable than the mints; it has long been employed as an aperient and deobstruent, particularly in hysteric complaints, suppressions of the uterine purgations, and in disorders of the breast.

Origanum.—The leaves and flowery tops have an agreeable smell and pungent taste, resembling thyme and garden marjoram, with which it seems to agree in virtue; an infusion, drank as tea, has been recommended in weakness of the stomach, and disorders of the breast, for promoting perspiration and the fluid secretions in general: they are sometimes used in nervine and antirheumatic baths; and the powder of the dried herb as an errhine. The essential oil is applied on cotton for easing the pains of carious teeth.

HYSSOPS.

GARDEN HYSSOP.—The leaves have an aromatic smell, and a warm pungent taste. Besides the general virtues of aromatics, they were formerly used in humoral asthmas, coughs, and other disorders of the breast and lungs, when unaccompanied with inflammatory symptoms; and were said to promote expectoration. The infusion of the leaves is superior to the distilled water: it may be sweetened with honey, liquorice, or sugar, and drank as tea. The external application of hyssop is recommended in the forms of fomentation and poultice, in contusions, and for removing the blackness occasioned by the extravasated fluids.

Hedge Hyssop—operates as a drastic purgative and emetic; it is also a powerful anthelmintic, deobstruent, and diuretic; and requires great cau-

tion in its use. It may be exhibited to the extent of half a drachm, in powder; and in infusion, to three drachms, but a slight decoction made in milk, operates far more mildly. An extract made with wine, is directed to be taken in doses of from one to two scruples.

The roots are less ungrateful to the taste, and less violent in operation than the herb, they are said to vomit and purge without much inconvenience, and are recommended in all disorders proceeding from a superabundance of serum. Both the herb and root are highly extolled in maniacal and dropsical cases.

CHAMOMILE AND CUCKOW FLOWERS.

BESIDES the general virtues of chamomile flowers as a bitter, they have been supposed to have some degree of carminative, anodyne, and antispasmodic power, depending on its odorous matter. They are recommended in colics of different kinds, particularly such as arise from flatulencies or cold; in hysterical and hypochondriacal disorders, and nephritic pains; in the pains of childbed women, and deficiencies of the uterine purgations; and in intermitting fevers where a viscosity of the humours or obstructions of the viscera, render the Peruvian bark ineffectual or prejudicial. In this last intention, the chamomile is generally assisted by the fixed alkaline salts, sal ammoniac, or other aperients, and also by cor-

roborating materials. The dose of the dry flowers is from ten to sixty grains, in the form of powder, or rather of an electuary, with conserve of orange peel, &c. In infusion, as tea, it is taken cold as a stomachic, and warm to work off emetics; it is also administered with oil, &c. for clysters: the decoction, (to which is occasionally joined, wormwood, southernwood, poppy heads, &c.) is used as a discutient, emollient, and anodyne fomentation.

Its essential oil possesses the antispasmodic powers in a higher degree than the flowers, but on the contrary does not possess the virtues depending on the presence of the bitter extractive, which is fully contained in its extract. Dose of the essential oil of chamomile, is from two to four drops; and of the extract, from half a scruple to a drachm.

Cuckow Flowers.—Their virtue in hysteric and epileptic cases was first noticed by Ray. Sir G. Baker, who brought them into use, has given them with success in a spasmodic asthma, St. Vitus's dance, &c. He directs the dose from twenty to sixty grains of the powdered flowers twice a day. See his account in the *Medical Transactions of the London College, vol. I.*

It is observed in the new Edinburgh Dispensatory, that they were first employed as a diuretic; and of late in nervous diseases, as epilepsy, hysteria, asthma, chorea, &c. A drachm or two of

the powdered flowers is directed to be given two or three times a day; they have little sensible operation, except that of sometimes promoting sweat.

LAVENDER AND ROSEMARY;—THE FLOWERS, &c.

LAVENDER flowers are used as a perfume, and employed medicinally as mild stimulants and corroborants, in vertigoes, palies, tremors, and other debilities of the nervous system, both internally and externally. The leaves or flowers are sometimes taken in the form of conserve; into which they are reduced, by beating them while fresh, with thrice their weight of double refined sugar. The oil is taken internally, from one drop to five, and employed in external applications for stimulating paralytic limbs, and for destroying eutaneous insects. The English oil of lavender is much superior to the French. A spirit (lavender water) is prepared by pouring a gallon of proof-spirit on a pound and a half of fresh gathered flowers, and drawing off five pints by the heat of a water bath. It is also prepared extemporary, by means of its essential oil and rectified spirit of wine; to which is frequently added, small quantities of the essences of ambergris, musk, and bergamot; but to many, these essences are disagreeable.

More compounded spirits or tinctures of this kind, in which other aromatics are joined to the lavender, have been distinguished by the name of

palsy drops; such as the *tincture of lavender*, which is thus prepared: take three pints of the simple spirit of lavender, and one pint of spirit of rosemary, digest it on half an ounce of cinnamon, half an ounce of nutmegs, and one ounce of red saunders, as a colouring ingredient: *London Pharm.*

The Colleges of Edinburgh and Dublin, to the above quantities of spirits, order one ounce of cinnamon, two drachms of cloves, half an ounce of nutmegs, and three drachms of red saunders. They are all grateful cordials, and are taken internally, either on sugar or in any convenient vehicle, from ten to an hundred drops.

Rosemary—is a warm pungent aromatic, very serviceable in cold phlegmatic habits, and in debilities of the nervous system. The tender tops are the strongest, both in smell and taste, but the flowers are most pleasant. Its oil and spirit are used as a perfume, and for embrocations, &c.

ELECAMPANE, COLTSFOOT, MAIDENHAIR, &c.

ELECAMPANE roots are gently stimulating, nearly similar in their action to angelica; when fresh procured they have a weak and not very agreeable smell, which, on thoroughly drying and keeping for some time, is greatly improved, and approaches to that of orris. It is used as a diaphoretic and stomachic, for promoting expect-

toration in humoral asthmas and coughs, and for attenuating viscid juices in general. The dose of the dry root in powder, is from a scruple to a drachm or two. The spirituous extract is considerably stronger than the watery. The recent roots are, like angelica, sometimes candied, which the Germans prefer to ginger, as a stomachic; they likewise make a wine of it.

Coltsfoot.—The leaves and flowers are ranked among the principal pectoral herbs. Infusions of them with liquorice, or with herbs of a similar intention, are drank as tea, and sometimes with considerable benefit, in catarrhus disorders, and coughs threatening consumption.* They have been found serviceable in hectic and colliquative diarrhæas, and some use it in scrophula. It is directed to be taken in milk.—See *Percival's Medical Essays and Experiments*.

Maidenhair—is supposed serviceable in disorders of the breast, particularly in coughs and hoarseness arising from thin acrid defluxions; it is usually taken in infusion or decoction, with the addition of liquorice. A *pectoral syrup* is prepared from an infusion of five ounces of the dry leaves, and four of liquorice root, in five pints of boiling

* The ‘*Cough Drops*,’ ‘*Essence of Coltsfoot*,’ and ‘*Balsam of Honey*,’ are only solutions of opium and resinous substances in alcohol; they are, in these cases, frequently injurious.

water. The syrup sold under the name of *capillaire*, has an admixture of orange-flower water.

Ground-Ivy—is an useful corroborant, aperient, and detergent; it is recommended against laxity, debility, and obstructions of the viscera: it formerly was much extolled for cleansing and healing ulcers of the internal parts, even of the lungs; and for purifying the blood: it was also the custom to infuse it in ale, which it remarkably helps to fine down, but this is an improper mode of administering it as a medicine. All its valuable parts may be concentrated in an extract, by which the unpleasant smell of the herb is entirely exhaled.

Balm.—A tea made from the fresh leaves or young shoots, and acidulated with lemon juice, (lemonade,) is a pleasant drink in febrile diseases.

Sage.—An infusion prepared with the dry leaves, and acidulated as above, is also an agreeable diluent in fevers, and, with the addition of alum and honey of roses, proves an useful astringent gargle in sore throats, &c. Sage is stimulant, carminative, and tonic; in cold phlegmatic habits it excites appetite, and is serviceable in debilities of the nervous system.

The Chinese highly esteem it, and prefer it to their own tea: it is said to be endowed with the power of resisting the putrefaction of animal substances.

Juniper Berries—give out nearly all their virtue, both to water and spirit; and yield an essential oil, which is very subtile and pungent; their decoction inspissated to the consistence of a soft extract, has a pleasant, balsamic, sweet taste. The oil is a very stimulating diuretic, approaching in quality to that of turpentine, but the extract, as being divested of the oil, has no such effect. This last may be used with advantage in cases where the more stimulating preparations would be improper, as in catarrhs, debilities of the stomach and intestines, and difficulties of the urinary excretions in persons of an advanced age. Among the aromatics that have been tried in composition with juniper berries, the seeds of sweet fennel and caraway seem the best adapted to improve their flavour: a cordial water or spirit, is prepared by drawing off a gallon of proof-spirits from a pound of the berries and an ounce and a half of each of these seeds. This spirit is strongly impregnated with the volatile virtue of the berry; to which the more fixed ones may in many cases be usefully superadded, by mixing with it a proper quantity of the extract.

LINSEED, ANISE, CARAWAY, & OTHER SEEDS.

INFUSIONS of linseed (like other mucilaginous liquors,) are used as emollients, incrassants, and obtunders of acrimony, in heat of urine, stranguries, thin defluxions on the lungs, and other

like disorders: a spoonful of the seed, unbruised, is sufficient for a quart of water, larger proportions rendering it disagreeably slimy. It may be sweetened with honey, liquorice, &c. and mixed with fresh milk.

The mucilage obtained by inspissating the infusion or decoction, is an excellent addition for reducing disgusting powders into the form of an electuary; occasioning the compound to pass the fauces freely, without sticking or discovering its taste in the mouth.

The oil, when *cold drawn*, is supposed to be of a more healing and balsamic nature than almond, olive, or the other oils of this class; and has been particularly recommended in coughs, spitting of blood, colics, and constipations of the bowels: it forms, when mixed with an equal part of lime water, a most excellent application to burns and scalds; and if the pain be acute, tincture of opium may be added.—See *Burns*, &c. The powder of the seeds, or the matter remaining after the oil has been expressed, are employed externally in emollient and maturing cataplasms.

Anise, Caraway, Dill, and Sweet Fennel Seeds;— They are aromatic, stomachic, and carminative, and proper for flatulencies, &c. Besides their simple and spirituous waters and essential oils, a spirituous extract is ordered, and as it contains the entire virtues of the seeds, is a most valuable and ready preparation.

Coriander and Cumin Seeds—are also carminative, &c. the first being more mild and pleasant than the other, is most proper for children, to whom it is often given in the gripes, &c. Cumin seed being somewhat unpleasant, is chiefly used externally; it gives names to a cataplasm and plaster. *Fenugreek*, (a nutritious seed,) enters, along with cumin and coriander, the composition of curry powder.

EATABLE LIVERWORT;* ARROW ROOT,
AND PEARL BARLEY.

THE inhabitants of Iceland use this liverwort as food and physic. It is usually dried and ground into a meal, with which they make pottage and other preparations, adding either water or milk: it is directed to be previously steeped in water, in order to extract the bitterness and cathartic quality. An ounce of this meal boiled for a quarter of an hour in a pint of water, and afterwards strained, yielded seven ounces of a mucilage as thick as that procured by the solution of one part of gum arabic in three of water. Iceland

* The *caninus* or ash coloured ground liverwort, has been rendered famous by the celebrated Dr. Mead, and Mr. Dampier; who have asserted that it was an infallible cure for the bite of a mad dog, if administered previous to the hydrophobia making its appearance.—See *Mead's Mechanical Account of Poisons*; and *Dampier's, in the Philosophical Transactions*:—but it is now entirely discarded.

liverwort has been much used at Vienna, and lately introduced into this country; it is recommended, when boiled in milk, to be taken as a remedy for coughs and consumptions; of which the patient's diet is chiefly to consist: it is said to be antiseptic, easy of digestion, and remarkably nourishing. It is also made use of in other cases, where the stomach is so weak that common aliments are rejected.

Arrow Root Powder—makes excellent food for infants, and for the aged and infirm; it also is particularly proper for rickety and consumptive children, &c. It is thus prepared: put a desert spoonful of the powder into a bason, well mix with it as much cold *soft* water as will make it into a thin paste; then pour on half a pint of boiling water, stirring it briskly, and boil it for a few minutes, when it will become a clear smooth jelly; to which, for adult persons, may be added, two or three table spoonsful of sherry or other white wine, a little lemon peel, or a few drops of its essence; and refined sugar to make it agreeable. The juice of Seville orange or lemons, may likewise be mixed with it; but if intended as food for children, substitute fresh milk, instead of the above. Arrow root is useful to thicken broths, &c. This powder has been much adulterated, on which account it is now somewhat fallen into disrepute; but the genuine arrow root, perhaps, affords a larger proportion of nutritive mucilage than any other vegetable hitherto discovered.

For the different modes of preparing rice, sago, salep, tapioca, &c. &c. see *Table of Diet*.

Pearl Barley—when boiled, forms an excellent nutriment, while a decoction of it properly acidulated, is one of the best beverages in fevers, &c. ; for, however trivial medicines of this class may appear to be, they are of more consequence in the cure of acute diseases, than many more elaborate preparations ; and should therefore be prepared so as to be as elegant and agreeable as possible.

Decoction of Barley, or Barley Water,—is thus made: take two ounces of pearl barley, first washed from the mealy matter that adheres to it, with some cold water ; then boil it a little with about half a pint of water, to extract the colouring matter ; throw this water away, and put the barley thus purified, into five pints of boiling water, which boil down to one half, and strain.

Without this precaution, the farinaceous and colouring matters would occasion, instead of allaying, thirst.

Compound Decoction of Barley.—Take of the simple decoction, two pints ; figs, sliced, two ounces ; liquorice root, sliced and bruised, half an ounce ; raisins, stoned, two ounces ; distilled* water, one pint. Boil to two pints and strain.

* Distilled water is also particularly mentioned by the Colleges in several of their formulæ. The general use of pure or distilled water, in diet, as well as medicine, cannot be too strongly inculcated ; indeed many disorders

MARSH-MALLOW ROOTS, GUMS, AND STARCH.

MARSH-MALLOW root is used as an emollient and demuleent, in diseases attended with irritation and pain, as in various pulmonary complaints, in affections of the alimentary canal, and urinary organs; and is applied externally in emollient fomentations, gargles, and clysters. The root when peeled and dried, is perfectly white; it is given in powder, from a scruple to a drachm or two, either by itself, or in conjunction with the gums, starch, or sugar. It may, however, be taken to better advantage in the form of infusion or decoction, sweetened with a little liquorice. An ounce of the dried root is sufficient for two or three pints of water, a larger proportion rendering the liquor disagreeably slimy. A syrup, made by boiling a pound of the fresh roots in a gallon of water till half the liquor is wasted, pressing out the decoction, and after settling for a night, boiling it down with four pounds of refined sugar, till the weight of the whole is six pounds, is kept

would be much alleviated if not removed by its liberal use. The ancients esteemed it as a catholicon, or universal remedy.—An infusion or decoction of well toasted bread is likewise a very pleasant diluent of the astringent kind. In the cholera morbus, or bilious vomitings and purgings, it is often retained by the stomach when other liquors and medicines are rejected; and in several instances, by being drank plentifully, has effected a cure. Fresh bran made into tea, and sweetened with simple oxymel, may also be used against coughs, &c.

in the shops, and used occasionally in some disorders of the breast, and for sweetening emollient decoctions in nephritic cases, &c.

Arabic and Tragacanth.—These gums are used as demulcents, and as pharmaceutical agents; being extremely useful for giving form to some remedies, and for correcting the acrimony of others. They are given in diarrhœas, dysenteries, chin-cough, hoarseness, strangury, &c.

Compound Powder of Gum Tragacanth.—Take of tragacanth, powdered, gum arabic, and starch, of each an ounce and a half; double-refined sugar, three ounces; rub them together into a powder. *Dose:* from half a drachm to two or three drachms, occasionally repeated.

Mucilage of Tragacanth, from the Edinburgh Dispensatory; take of gum tragacanth, in powder, one ounce; boiling water, eight ounces; macerate for twenty-four hours; then well rub it together that the gum may be dissolved; and press the mucilage through linen cloth, that it may be freed from its impurities. The College of London directs the mucilage to be made with half an ounce of this gum, to ten ounces of water; while the Dublin College prescribes only one drachm of it to eight ounces of water. The Edinburgh recipe, which is made with eight parts of water, is a paste rather than a mucilage; the London muci-

lage is made with twenty parts of water, and the Dublin with sixty-four.

Mucilage of Gum Arabic is ordered to be prepared with one part gum arabic, in powder, and two parts boiling water.

These mucilages are useful to allay tickling coughs, &c.; and for the different purposes above mentioned.

Mucilage of Starch.—Take of starch, half an ounce; water, one pound. First rub the starch, gradually adding the water, then boil them a little. This preparation is often successfully employed as a elyster, in diarrhœas depending on acrimony of the intestines; and is useful in other cases where a glutinous substance is required.

ALMONDS AND SPERMACETI.

ONE ounce, or an ounce and a half of fresh blanched sweet almonds, with a quart of water, form the *emulsion* or *milk of almonds*; the water is to be gradually poured on after the almonds have been first thoroughly pounded in a marble mortar. It is given frequently, by large draughts at a time, in stranguries, heat of urine, &c. a little sugar or other grateful materials are commonly added; and for most of the intentions in which emulsions are generally given, gum arabic is an useful addition; if the water is heated, to hasten its solution, it must be suffered to get cold before it is poured on the almonds. This emulsion

should be made fresh when wanted, as by keeping it becomes sour. Acids, mixed with emulsions, promote the separation of the oily and serous parts, producing immediately a thick curd. Oil of almonds, triturated with a thick mucilage of gum arabic, forms a more permanent emulsion; from which the oil does not separate on standing for some days, nor on the addition of acids; though it is speedily disengaged by alkalies, both fixed and volatile. One part of gum, made into a mucilage, with an equal quantity of water, is sufficient for four parts of the oil. The white or yolk of egg, and a little syrup, with a few drops of volatile spirit, render the oil also soluble in water, but less perfectly. Sweet almonds are an useful intermedium for uniting with water substances which of themselves are not miscible with it. Camphor,* and the purgative and other resins, triturated with about six times their quantity

* *Camphorated Emulsion*.—Take of camphor, one scruple; sweet almonds blanched, two drachms; refined sugar, one drachm; water, six ounces; mix as above directed.

The Camphorated Mixture is made by rubbing together half a drachm of camphor, with a few drops of alcohol, and two drachms of sugar, till it is reduced to a powder; and afterwards adding, by degrees, a pint of boiling water. Both these preparations must be carefully strained off. The emulsion, in many respects, is preferable to the mixture, because the unctuous quality of the almonds serves in a great degree to cover the pungency of the camphor, without lessening its activity; but the mixture is more frequently used, on account of its keeping better. They are given in fevers, &c. from one to two ounces.

of almonds, dissolve along with them in water into a milky liquor, and are thus excellently fitted for being taken in a liquid form. The oils obtained by expression from both sorts of almonds are in their medical qualities the same.

Bitter Almonds, and emulsions formed from them, have been recommended as aperients, resolvents, diuretics, and anthelmintics; but they appear to be of too dangerous a kind. These almonds in substance, taken freely, occasion sickness and vomiting: to dogs and some other animals they are poisonous. Their simple distilled water has been found also poisonous to brutes; and there are instances of cordial spirits flavoured by them being destructive to man. The kernels of other fruits, that have any bitterness or particular flavour, appear to be impregnated with a substance of a similar nature. The matter remaining after the expression of the oil, retains all the bitterness, &c. and tastes much stronger than the almond did at first. It is prepared into a paste, and used as a cosmetic. The advertised lotions, &c. for the skin, are mostly prepared from bitter almonds; to which are added, the muriated quicksilver, or acetated ceruse; *i. e.* corrosive sublimate and sugar of lead. On the probable effects of such repellents, see *Willich*, &c.

Spermaceti.—Its virtues, when fresh, are those of a mild emollient: it is of considerable use in pains and erosions of the intestines, in coughs

proceeding from thin sharp defluxions, and in general in all cases where the solids require to be relaxed, or acrimonious humours to be obtunded. For external purposes it readily dissolves in oils; and for internal use, it may be united with aqueous liquors, into the form of an emulsion, by the mediation of almonds, gums, or the yolk of egg.

Spermaceti Emulsion or Mixture;—take of spermaceti and refined sugar, of each two drachms; gum arabic, powdered, one drachm; or half the yolk of an egg; beat it well together in a marble mortar, to which, by degrees, add six ounces of water. Dose: the same as camphorated emulsion. It is often joined with opium, and given to women immediately after delivery.

HONEY, SUGAR, AND THEIR PREPARATIONS.

THE best honey for medical use, is that which is free from colour, and contains the largest grains when it concretes: it should also be as free from flavour as possible. Virgin honey, or that obtained from young bees, and which flows spontaneously from the combs, is the purest and finest. Honey consists principally of sugar, but it also contains mucilage and an acid; and is often impregnated with the essential oil of the flowers from which the bees have gathered it. For internal use, sugar is preferable, as honey, in some constitutions, produces gripes and colic pains;

but by boiling, it loses that quality. From its stimulus, however, it forms an excellent detergent gargle, and facilitates the expectoration of viscid phlegm : it is sometimes used as an emollient application to abscesses, stings from wasps, &c. and as a detergent to ulcers.

Honey, exposed to a gentle heat, as that of a water bath, becomes thin, and throws up to the surface its waxy impurities, together with the meal or flour sometimes fraudulently mixed with it, which may thus be separated by despumation, so as to leave the honey pure.

Acetated Honey, or *simple Orymel*, is made by mixing two pounds of honey with one of vinegar, boiling it down in an *unglazed* earthen pipkin, to a syrupy consistence. This preparation is sometimes impregnated with the virtues of squills, and other vegetables, &c. It also excellently covers the taste of purging salts and waters: it is taken in colds attended with coughs, and used in sore throats, for which, when diluted with some aromatic or astringent infusion, as sage tea, damask rose tea, &c. it makes an useful gargle.

Sugar is principally used in Pharmacy to cover bad tastes, to give form, and to preserve more active substances. In using it for the last purposes, it should be observed, that if the proportion of sugar employed be too small, it will promote instead of retarding the fermentation of the articles it is intended to preserve. Sugar is also

a very wholesome and powerful article of nourishment, for during crop time, the negroes in the West-Indies, notwithstanding their increased labours, always grow fat. The coarser and impure kinds are slightly purgative; the refined sort applied in powder, to abraded or inflamed surfaces, proves gently stimulant; it acts also as an escharotic in spongy and unhealthy granulations.

In making syrups, where it is not directed otherwise, this is the rule: take of double-refined sugar, twenty-nine ounces; any kind of liquor, one pint; dissolve the sugar in the liquid, in a water-bath; then set it aside for twenty-four hours; take off the scum and pour off the syrup from the feces, if there be any. The College of Dublin directs a pound and a half of the prescribed liquor to be taken, and the solution to be boiled down to one pound before it be set aside.

AROMATICS, CARDIACS, &c.

THE lesser cardamom seeds, fresh freed from their husks, are made use of in several officinal tinctures, wines, infusions, &c.; they are a very warm, yet not fiery aromatic, nor subject like the spices of the pepper kind, to produce immoderate heat, or inflame the bowels. Their simple tincture is made by digesting three ounces of the bruised seed in a quart of spirit: the compound or stomachic tincture, is prepared with the addition of cinnamon, caraways, cochineal, and

raisins. Both these tinctures are pleasant warm cordials, and are used, like ginger and the rest of the spices, for flavouring other medicines, and for rendering mineral waters, and other saline liquors, more acceptable to the stomach. With this intention, I have prepared *aromatic* pearls, lozenges, and essences from cardamoms, ginger, and cinnamon; and also essences from *all* the spices, culinary plants, &c. These essences possess, in a more ready, economical, and powerful manner, the entire virtues of the different articles, and are sold separate, or together in cases of various kinds, for families, inns, or sea-service, at the ROYAL ELABORATORY, Gloucester.

Aromatic Powder.—Take of cinnamon, two ounces; smaller cardamom seeds, ginger, long pepper, of each one ounce; powder them together. This is an agreeable, hot, spicy medicine; and as such, may be usefully taken in cold phlegmatic habits, and decayed constitutions, for warming the stomach, promoting digestion, and strengthening the tone of the viscera. The dose is from ten grains to a scruple and upwards.

The aromatic tincture, or compound tincture of cinnamon, is made from this powder and proof-spirit; it is taken in doses of a tea-spoonful or two, diluted with mint tea, wine, &c.

The Aromatic Electuary, or Confection of the Edinburgh Dispensatory, is likewise prepared with the aromatic powder, and syrup of orange

peel, the syrup being previously boiled to the consistence of honey, so as to form, with three ounces of the powder, and six ounces of the syrup, a thick electuary.

The *Aromatic* or *Cordial Confection* of the London College, is thus made: take of zedoary,* in coarse powder, and saffron, of each half a pound; distilled water, three pints; macerate for twenty-four hours, then press and strain; reduce the strained liquor by evaporation, to a pound and a half, to which add, compound powder of crabs claws, sixteen ounces; cinnamon, and nutmeg, of each two ounces; cloves, one ounce; smaller cardamom seeds, half an ounce; double-refined sugar, two pounds. Let the aromatics be finely powdered, and formed into a confection by adding to it the sugar, &c. The recipe for this confection, from the Dublin College, is as follows: take of conserve of orange peel, three ounces; cinnamon and nutmeg, of each in powder, half an ounce; saffron, and ginger in powder, of each two drachms; double-refined sugar, one ounce; sprup of orange peel, a sufficient quantity to make the confection. They are each given in doses of five grains, and from that to half a drachm or more; as a cordial, or as a vehicle for forming into boluses, &c. more active substances: perhaps,

* Zedoary is of a spicy bitterish taste; it formerly was used in medicine as a stomachic, &c.; but is now seldom employed, except in the above confection.

the simple composition of the Edinburgh College serves all these purposes as well as the complicated formula of the London College.

Saffron is a very elegant aromatic: besides the virtues which it has in common with all the bodies of that class, it has been alledged that it remarkably exhilarates, (raises the spirits,) and is deservedly accounted one of the highest cordials: taken in large doses, it is said to occasion immoderate mirth, involuntary laughter, and the ill effects which follow from the abuse of spirituous liquors. It is also said to be particularly serviceable in hysteric depressions, or obstructions of the uterine secretions, where other aromatics, even those of the more generous kind, have little effect. But some experiments made by Dr. Alexander, serve to shew that it is much less powerful than was once imagined: and it was given in the Edinburgh Infirmary by Dr. Henry Cullen, even to the extent of half an ounce a day, in several hysterical cases, without any sensible effect whatever; so that of late the estimation in which it was held as a medicine has been on the decline.

Saffron imparts the whole of its virtue and colour to rectified spirit, proof-spirit, wine, vinegar, and water: a tincture drawn with vinegar, loses greatly of its colour in keeping: the watery and vinous tinctures are apt to grow sour, and then lose their colour also: that made in pure spirit keeps in perfection for many years. A

syrup of saffron is kept in the shops, and used both to colour and sweeten draughts, &c.

Ginger is distinguished into two sorts, the black and white; the latter is best. It is indigenous in the East Indies, but is now produced in Jamaica, and the other Western Islands. Ginger is found excellent in cold flatulent colics, debility of the intestines, and gout; it is warming to the stomach, and invigorating to the whole nervous system, and, like peppermint, does not inflame so much as the peppers: its effects are also more durable. The officinal preparations are, a powder, a preserve, and a syrup; it is likewise employed in conjunction with other medicines in several tinctures, powders, &c. *Dose*: of the ginger in substance, is from five to twenty grains, and upwards.

The Author's pearls, lozenges, and essence, possess, in the most agreeable and concentrated forms, the entire virtues of this root, being divested of the inert or woody matter; they are to be taken at discretion, the essence in less doses than the powder, &c.

Cinnamon and Cassia;—The bark of cinnamon is one of the most pleasant of the aromatics, and also one of the most powerful stimulants we possess. Its essential oil is administered as a cordial, in cramps of the stomach, and in syncope, in doses of from one to three drops; or as a stimu-

lant in paralysis of the tongue, or to deaden the nerve in tooth-ach : but it is principally used to cover the less agreeable taste of other drugs. The simple and spirituous waters* are made by distilling a pound of the bruised bark previously macerated for a day in ten pints of water or proof-spirit, drawing off from either of them one gallon. The tincture of cinnamon is prepared by digesting an ounce and a half of the bark in a pint of proof-spirit. It possesses the astringent virtues of the cinnamon, as well as its aromatic cordial ones ; and in this respect, it differs from its distilled waters and essential oil. Cassia, the buds, bark, and oil, are used for the same purposes as cinnamon ; to which it is much inferior ; it is also often fraudulently mixed with, and sold for that valuable article.

Cloves are very hot and stimulating : its essential oil is employed in some of the officinal preparations, and sometimes applied to carious teeth.

Mace and *Nutmeg*,—Like cloves, are more considered as articles of condiment, (seasoning, &c.) than as medicines ; they are, however, occasionally, and as usefully employed with medicine as with food. The spirituous water and oil

* On account of the weight of the essential oil of cinnamon, the distilled spirit brings over very little of its flavour, but the simple water is strongly impregnated with it.

of nutmeg are officinal. The spirit is taken diluted, as an aromatic or cordial, in doses of from one to four tea-spoonsful; the oil, from two to five drops; and the nutmeg itself, from five to fifteen grains: when exhibited in larger quantities, it proves narcotic. Mace, which is the immediate covering of this nut, is less heating, &c.; and is therefore more suitable to weak stomachs: its flavour is also much finer.

Pimento or Jamaica Pepper, is frequently substituted, both in hospitals and among the poor, for the more costly spices; which it somewhat resembles in flavour, from whence its name—allspice. Both its spirituous and simple waters, and essential oil, are extracted.

Long, Black, and White Peppers;—The two former are used in medicine, and the only difference between the two latter, is, the berries or black pepper, are gathered before they become ripe; hence they become black and corrugated; while white pepper corns, by being suffered to remain till fully ripe, are easily freed of the external coat by maceration in water:—it is less pungent than black, or long pepper.

Capsicum, Guinea, or Cayanne Pepper,—As a medicine, is sometimes prescribed in minute quantities, as one of the highest stimulants, in cold sluggish phlegmatic temperaments, in some paralytic cases, in relaxations and insensibility of the

stomach, and for promoting the efficacy of aloetic medicines and the deobstruent gums in uterine disorders. It is used freely at table by the natives, and possibly this pungent antiseptic in those warm climates may be most proper to resist or correct the putredinous colliquation of the humours which immoderate heat produces. It has also been successfully given in the intermittents prevalent in Guiana, and for the suppression of vomitings in putrid fevers.

Dr. Adair, who it is supposed first introduced it, recommends its use in a variety of diseases, particularly in malignant sore throats; in several cases of this kind which proved very fatal in the West Indies, resisting Peruvian bark, wine, and other remedies commonly employed, he gave the powder of cayenne pepper to the extent of six or eight grains, formed into pills, or under the form of tincture, made by infusing half an ounce of it in a pint of rectified spirit of wine, of which, from one to three drachms, when diluted, was a dose: see *Duncan's Medical Commentaries* for 1787.

In tropical fevers, with coma and delirium, which are commonly attendants, cataplasms of capsicum* have a speedy and happy effect; they redden the parts, but seldom blister, unless kept on too long. In ophthalmia from relaxation, the diluted juice of capsicum is said to be a sovereign

* Dr. Jackson, in page 267 of his 'Outline of the History and Cure of Endemic and Contagious, or the Yellow Fever of the West Indies;' speaks of washing the head with cayenne vinegar.

remedy. When employed for culinary purposes, there can be little doubt that capsicum is one of the purest and strongest stimulants which can be introduced into the stomach; while it has nothing of the narcotic effect of ardent spirit.

The essence, prepared by the author, will diffuse itself more generally and agreeably than cayanne in substance.

Orange and Lemon-peel, &c.—From the exterior rind of oranges and lemons, elegant conserves, syrups, tinctures, and waters, are made; they are also used in many other preparations of pharmacy. They are agreeable, warm, aromatic bitters; but that of lemon is considerably less hot, and more evanescent than the orange; though the spirituous extract of lemon peel possesses the aromatic taste and smell of the subject in much greater perfection than an extract prepared in the same manner from the peels of oranges. The expressed juice of lemons* and oranges, are pleasant acids, and of

* Mr. Georgius has described, in the Memoirs of Stockholm for the year 1774, a method of purifying this and other vegetable acids, without changing its properties. He fills a bottle with lemon juice, closes it with a cork, and preserves it in a cellar. The acid has been thus preserved for four years, without corrupting. The mucilaginous parts had fallen down in flocks; and a solid crust was formed beneath the cork, the acid itself having become as limpid as water. To dephlegmate the acid, he exposes it to frost; and observes that the temperature ought not to be too cold, because in that case, the whole would become solid; and though the acid would thaw the first, it would always be productive of some incon-

great use in inflammatory and putrid disorders, both acute and chronical; they form with sugar most grateful sub-acid syrups. The recent expressed juice of lemons with prepared kali, (see page 9,) is employed in the saline or effervescing draught or mixture, so useful in many complaints. From the flowers of the orange, a highly odoriferous water is drawn: it is sometimes used as a flavouring ingredient in medicine, but chiefly as a perfume: a fragrant essential oil is also extracted from these flowers.

From two pounds of recent orange or lemon peels, ten pints of water are directed to be drawn off by distillation. These distilled waters are

venient. In order to concentrate it to better advantage, the ice must be separated as it forms. The first ice is tasteless, and the last is rather sour; and by this means the liquor is reduced to half. The acid thus concentrated is eight times as strong, two parts only being required to saturate one part of salt of tartar.

The citric acid, when thus purified and concentrated, may be kept for several years in bottles, and serves for all uses, not excepting that of making lemonade.

Lemon juice may also be evaporated to the consistence of honey, or rob, but this always gives an empyreumatic taste, and does not separate the mucilage, so that it is still apt to ferment in tropical climates: the addition of a quantity of alcohol to the inspissated juice, separates the mucilage but not the extractive or sugar. By means, however, of Scheele's process, as reduced to determinate quantities by Proust, Mr. Coxwell's concrete salt of lemons, according to Duncan, is prepared:—viz. 'to 94 parts of lemon juice, 4 parts of carbonate of lime are to be added: the carbonic acid is separated by effervescence, and a quantity of insoluble citrate of lime is pre-

useful as diluents in fevers and other disorders where the stomach and palate are very apt to be disgusted; but they are now, like the alexiterial water, &c. seldom kept in the shops.

The various French *liqueurs*, or odoriferous spirituous cordial waters, are prepared from the aromatic barks, blossoms, and kernels of fruits,*

precipitated. By evaporating the supernatant liquor, another portion of citrate of lime is obtained. These added together, amount to about $7\frac{1}{2}$ parts, and require 20 parts of sulphuric acid, of the specific gravity of 1.15 to decompose them. The sulphate of lime being nearly insoluble is precipitated, and the citric acid remains in solution, and is to be separated by washing, and crystallized by evaporation. If too much sulphuric acid be added, when the liquor is much concentrated, it re-acts upon the citric acid, and chars a portion of it. When this is the case, a little chalk must be added.—Citric acid is a powerful and agreeable antiseptic. Its powers are much increased according to Dr. Wright, by saturating it with muriate of soda (common sea salt). He recommends it as possessing very great efficacy in dysentery, remittent fever, the belly-ach, putrid sore throat, and as being perfectly specific in diabetes and lenteria.

* The kernels of the stones of fruits, as of cherries, apricots, peaches, plumbs, &c. are of the same general nature with almonds. Those which have any bitterishness or particular flavour, receive these qualities from a subtile principle; which is extracted by maceration in vinous spirits; which rises in distillation with water; and which, when thus separated from the oily and farinaceous matter of the kernel, and combined with only a small quantity of the menstruum, appears to be, like the flavouring matter of bitter almonds, poisonous.—See page 157; and ‘Dr. Pevre, on the Poisonous Effects of Bitter Almonds,’ published in Vol. II. of the *London Medical Review*.

by digesting or distilling them with the purest spirit; which is afterwards diluted with water, and sweetened with sugar.

For example, to make the *eau divine*, the bark of four citrons is taken, and put into a glass alembic, with two pounds of good spirit of wine, and four ounces of orange flower water; after which distillation is performed in the sand bath. At the same time, dissolve one pound and a half of refined sugar in the like quantity of water. The two liquors on being mixed, become turbid; but, being left to stand, the result is an agreeable pellucid liquor.

To make the cream of roses, take equal parts of rose water, spirit of wine à la rose, and syrup of sugar. Mix these three substances, and colour the mixture with the tincture of cochineal.*

BALSAMS, RESINS, TURPENTINES, &c.

THE balsam or resin of copaiva, is an useful corroborating detergent medicine; it has been employed principally, and preferably to the other balsams, in gleans, the fluor albus, and in ulcerations of the urinary passages and the lungs. Fuller says, he has known dry deep coughs, coughing

* This insect has been strongly recommended as a sudorific, cardiac, and alexipharmic; but it is now used only for the sake of the fine colour it produces; it gives a deep durable red both to rectified and proof-spirit, and a deep purplish crimson to water.

up of blood and pus, voiding of chyle instead of urine, with great pains and weakness, cured by it; and that, notwithstanding the manifest warmth and bitterness of its taste, he has found it to agree in hectic cases;* the usual dose is from ten to thirty or forty drops; if taken to the amount of two or three drachms, it proves purgative.

It has been employed empirically, in hæmorrhoidal cases, in doses of from twenty to forty drops, once or twice a day, mixed with powdered sugar; and Cullen says he has frequently found it give relief. It dissolves in alcohol into a transparent liquor, of a fragrant smell, more agreeable than that of the balsam itself.

Balsam of copaiva is sometimes used externally as a vulnerary.

Balsamic Tincture.—Take of balsam of copaiva, one ounce and a half; balsam of Peru, half an ounce; English saffron, one drachm; alcohol, one pint; digest these ingredients together, in a sand-heat, for three days; and then pass the tincture through a strainer.

This tincture is an excellent balsamic, both for internal and external purposes. It is usually given, in doses of ten, twenty, or thirty drops, in the fluor albus, gleet, cachexies, some kinds of asth-

* For a censure of this practice, and of the use of the other balsams and resins in consumptive cases, see a paper of Dr. Fothergill's in Vol. IV. of the *London Medical Observations and Inquiries*.

mas and nephritic complaints, for strengthening the tone of the viscera, and corroborating the nervous system in general. Some caution is requisite in the use of these resinous warm medicines : in cold, languid, phlegmatic habits, they have for the most part good effects ; but in bilious and plethoric constitutions, where there is any tendency to inflammation, or immoderate heat, they are manifestly prejudicial, and raise or continue febrile symptoms.

Canada Balsam, and Balm of Gilead ;—The canada is an elegant balsam, almost colourless, and more agreeable than that of copaiva. Balm of gilead, or balsam of Mecca, &c. is rarely, if ever, to be met with genuine, in this country, being held in so high esteem by the Turks, who are in possession of the country where it is produced. They use it both as a medicine and as an odoriferous unguent and cosmetic. It has been recommended in a variety of complaints, and from the high price set upon it, many adulterations and fictitious articles are produced : but the canada or copaiva balsams will answer every purpose for which it can be employed in medicine.

The balm of gilead fir, now naturalized to our own climate, has a smell approaching to that of this celebrated balsam, from which it receives its name ; an agreeable resin exudes from the cones, in considerable quantity ; and one nearly of the

same kind, may be extracted by a strong spirit,* both from the cones and from the leaves.

Balsams of Peru, and Tolu.—Peruvian balsam is a very warm aromatic medicine, considerably hotter and more acrid than copaiva. Its principal effects are, to warm the habit, and to strengthen the nervous system. Hence it is used in some kinds of asthmas, gonorrhœas, dysenteries, suppressions of the uterine discharges, and other disorders proceeding from a debility of the solids. It

* Perhaps those delusive compounds, the '*Balm of Gilead*,' and '*Nervous Cordial*;' are somewhat similar, but rendered more stimulant or destructive by the addition of cantharides, &c.

Dr. Reid, one of the physician's of the Finsbury Dispensary, in his report of diseases, published in the Month. Mag. for Jan. 1808, says, that "in consequence of an accidental discovery of the fatal influence of the operation of an empirical compound alluded to in the last report, the writer has been induced to scrutinize more minutely into that subject, as its operation is connected with the production of mental as well as physical disease; in consequence of which he has detected several subsequent instances, in which the mercantile productions of quackery have rapidly led to irremediable disorder or distress. It is a traffic which more than even the slave trade ought to be speedily abolished."

To this I add, that the publications which accompany some of these nostrums, ought also to be suppressed, because they are of a tendency the most baneful to the morals of youth; being calculated by exciting curiosity and inflaming the passions, to render a vice familiar, which might otherwise have remained unpractised and unknown.

is employed externally, for cleansing and healing wounds and ulcers; and sometimes against palsies and rheumatic pains. **Dose**: from a scruple to a drachm. The tincture is prepared by digesting four ounces of balsam of Peru in one pint of alcohol. **Dose**: from one to three tea-spoonsful. Balsam of tolu has an extremely fragrant smell, somewhat resembling that of lemons; and an agreeable, warm, sweetish taste, very slightly pungent, and not accompanied, like that of most of the other balsams, with any nauseous taste. It possesses the same general virtues with those of Peru and copaiva, differing only in being less hot or irritating, and more grateful to the stomach as well as the palate. It totally dissolves in alcohol, and in this form may be mixed in substance with syrups, so as to impregnate a much larger quantity of them with its fine flavour: about two scruples of the balsam dissolved in an ounce of alcohol, are sufficient for two pounds of a simple flavourless syrup, made from refined sugar and water: the solution is to be stirred gradually into the syrup, just warm from the fire, and the mixture kept in the gentle heat of a water-bath till the spirit has exhaled.

The syrup is taken from a small to a large spoonful; the balsam and tincture of tolu, are administered in the same doses as the balsam and tincture of Peru.

Very agreeable lozenges acidulated with the acid of tartar, are made from this balsam, they are useful in some kinds of coughs, &c. The

balsamic or cough pills, which I have introduced in my medicine chests, are made with balsam of tolu, flowers of benzoine, gum ammoniacum, &c. **Dose** : from two to four.

Storax Pills, from Lewis's Dispensatory.—Take of strained storax, one ounce ; purified opium, two drachms and a half ; saffron, four drachms ; beat them together till perfectly united. One grain of opium is contained in five grains and four-fifths of a grain of this mass.

In the storax pills of the Edinburgh Dispensatory, the extract of liquorice is used instead of saffron, and in seventeen grains of the mass, there is only a grain of opium. Storax pills are principally active in consequence of the opium which they contain, and are chiefly given with a view to its slow solution in the stomach, and consequently to produce more gradual and durable effects.

Benzoine, or *Benjamin*;—This resin is nearly similar in virtues and fragrance to storax and tolu : a solution of it in alcohol, when mixed with twenty times its quantity or more, of rose or orange flower water, has long been established as a cosmetic, under the denomination of '*Virgin's Milk*.' The flowers of benjamin, or benzoic acid, is of great service in disorders of the breast, for resolving obstructions of the pulmonary vessels, and promoting expectoration : it is given in doses of from five to fifteen grains ; and chiefly employed in composition with other medicines, viz. the paregoric

elixir, and the balsamic or cough pills, &c. These flowers snuffed up the nostrils, are said to be a powerful errhine.

Compound Tincture of Benzoine, Traumatic, or Friar's Balsam, of the London and Edinburgh Colleges.—Take of benzoine, three ounces; (Storax, strained, two ounces; *London*.) balsam of tolu, one ounce; socotorine aloes, half an ounce; alcohol, two pints; digest with a gentle heat, and strain.

The Edinburgh College omit the storax, and use hepatic aloes in place of the socotorine. These differences are not very material; and both preparations may be considered as elegant simplifications of some very complicated compositions, which were celebrated under different names; such as Wade's balsam, Friar's balsam, Jesuit's drops, &c. These, in general, consisted of a confused farrago of discordant substances. They, however, derived considerable activity from the benzoine and aloes; and every thing to be expected from them may readily be obtained from the present formulæ. *Dose*: from fifteen to sixty drops, taken on sugar, or in white wine, &c.

It stands highly recommended, for warming and strengthening the stomach and intestines, expelling flatulencies, and relieving colic complaints. Externally it is applied for cleansing and healing wounds and ulcers; for discussing cold tumours, allaying gouty, rheumatic, and other old pains and aches, and in recent cuts, &c.; with the view

of stopping hæmorrhagies, and of promoting healing by the first intention, as it is called. There is, however, reason to think that its virtues have in many of the above cases, been considerably over-rated; and in recent cuts, especially if considerable, such applications are more injurious than useful.—See *Treatment of Incised Wounds*, Part II.

Turpentine—are the native balsams or resinous juices extracted from trees of the pine-tribe: four kinds of it are kept in the shops, 1. chio, or cyprus turpentine; 2. Venice turpentine; 3. Strasburgh turpentine; 4. common turpentine. All these species possess the same general properties, but the common turpentine,* as being the most offensive, is rarely given internally; it is chiefly used in plasters, &c. and for the distillation of the essential oil. They are active stimulants, increase the secretion of urine, to which they give the smell of violets even though applied only externally, and open the bowels. They are principally recommended in gleet, the fluor albus, and the like; and by some in calculous complaints: in all cases accompanied with inflammation, they ought to be abstained from, as this symptom is increased, and not unfrequently occasioned by them. Their dose is from one to four scruples; they are most commodiously taken in the form of a bolus, or blended

* A fluid extract prepared by decoction from the twigs of the common turpentine, is the well known essence of spruce, which, fermented with molasses, forms the fashionable beverage of spruce beer.

with watery liquors by the mediation of an egg or mucilage. Cullen in his *Materia Medica*, recommends terebinthinate clysters, in obstinate costiveness; they are said to be much preferable to the saline, as being more certain and durable: but besides evacuating and softening the bowels by this means, there is another intention of great moment, which is conveniently assisted this way, and that is strengthening and astringing them in long and obstinate diarrhœas, and dysenteries. To prepare the turpentine and different clysters, see Appendix.

The rectified, or etherial oil of turpentine, is highly stimulating and penetrating. Internally it acts as a diuretic or sudorific in very small doses, viz. from ten to thirty drops. It has, however, been given in much larger doses, especially when mixed with honey. Recourse has principally been had to such doses in cases of chronic rheumatism, particularly in those modifications of it which are styled *sciatica** and *lumbago*. But they have not

* Dr. Cheyne in the tenth edition of his ‘*Essay on the Gout*,’ recommends, as a perfect cure for sciaticas, though of many years standing, from one to four drachms of the ethereal oil of turpentine, to be taken with thrice its quantity of honey, in a morning fasting, with large draughts of sack whey after it, and an opiate at bed-time: this medicine is to be repeated with the intermission of a day now and then, if daily repetitions cannot be borne, for four or five days, or eight at furthest. It appears, however, highly imprudent to venture on such large doses, of a medicine so very hot and stimulating. It has also by some been recommended in venereal runnings, but it tends to inflame the parts and increase the disorder.

often been successful, and sometimes they have had the effect of inducing bloody urine. Externally it often produces excellent effects as a discutient in indolent tumours; as a stimulus in paralysis of the extremities, and in bruises; as an antispasmodic, and as a styptic, when applied on linen or lint, as hot as the patient can bear it, directly to the bleeding mouths of the vessels.

Frankincense may be looked upon as a mild corroborant, though at present it is seldom employed but in the venice treacle or mithridate (articles nearly exploded); and, externally, in plasters. An officinal plaster, made with half a pound of frankincense, and three ounces of dragon's blood (a resin so called) in powder, stirred into two pounds of the common plaster melted, now takes its name; it was formerly called *strengthening*, on account of the frankincense.

In France and several other parts of the Continent of Europe, the custom hath long prevailed of burning *antiseptic* or *aromatic* tapers, which are very grateful and reviving: they are generally made with charcoal, cinnamon, cascarilla, camphor, myrrh, and olibanum: olibanum was the true frankincense of the ancients; and the diffusion of its vapour around the altar, still forms part of the ceremonies of the Greek and Roman Catholic churches. The bruised odoriferous resins are also used for purifying halls, &c. by burning them on hot irons or braziers. These articles are prepared and sold with proper directions by the author.

Dr. J. C. Smyth obtained from the British Parliament a reward of five thousand pounds for the invention or first application of *Nitrous Vapour*, for the purpose of preventing or destroying pestilential contagion: his directions for preparing and applying it, will be given, together with the manner of using the *marine* acid for washing or purifying infected linen, clothes, bedding, &c. under the head Mineral Acids.

KINO, CATECHU, DRAGON'S BLOOD, &c.

KINO is an astringent vegetable extract, of great use in obstinate chronic diarrhœas, and dysenteries; in all passive hæmorrhagies, especially from the uterus; in fluor albus; and in diseases arising from laxity of the solids. DOSE: in substance, from ten to thirty grains. The Edinburgh and Dublin Colleges direct a tincture, in which two ounces of it are dissolved, in a pint and a half of proof-spirit: this tincture is the best form under which it can be exhibited in obstinate diarrhœas, and in cases of lenteria; but in hæmorrhagies, it is in general proper to exhibit the kino in substance, or diffused in an astringent draught, such as the infusion of red roses, and administered cold.

Catechu is also a vegetable extract, and was formerly termed, with great impropriety, Japan earth. It may be usefully employed, for most

purposes where an astringent is indicated; and is particularly proper in alvine fluxes; in uterine profluvia, in laxity, and debility of the viscera in general; in catarrhal complaints, and various other diseases where astringents are proper. It is often suffered to dissolve leisurely in the mouth, as a topical astringent for laxities and exulcerations of the gums, for apthous ulcers in the mouth, and similar affections: and is in some other cases applied externally, both under the form of solution and of ointment.

The author's lozenges of red rose-buds, and catechu, are in considerable estimation for coughs, catarrhs,* hoarseness, &c.; they are frequently used at routs and assemblies, as preventatives from the ill-effects of the night air; and are powerfully impregnated with the otto of roses. In catarrhal coughs and hoarsenesses, medicines of this kind act in general to much better advantage when thus gradually swallowed, than when taken at full doses at once.

The Edinburgh College directs an *electuary of catechu*, commonly called *Japonic confection*; it is thus made: take of extract of catechu, four ounces; kino, three ounces; cinnamon and nutmeg, each one ounce; opium, diffused in a sufficient quantity of Spanish white wine, one drachm

* On the connexion between catarrh and consumption, see Dr. Beddoes's 'Essay on the Causes, Early Signs, and Prevention of Pulmonary Consumption;' see also his 'Observations on the Medical and Domestic Management of the Consumptive,' &c.

and a half; syrup of dried red rose-buds boiled to the consistence of honey, two pounds and a quarter. Reduce the solids to powder, which mix with the opium and syrup, so as to form an electuary. The College of Dublin, instead of the syrup of roses, uses equal quantities of the syrups of ginger and orange peel, it also adds to the electuary, two drachms of the tincture of tolu.

These electuaries, which do not differ in any essential particular, are very efficacious and elegant astringent medicines, and are often given in doses of a tea-spoonful, frequently repeated, in cases of diarrhæa, &c. ; in the room of diascordium, mithridate, or Venice treacle; the ingredients of the electuary of catechu, being so well chosen and proportioned to one another, that the quantity of opium is the same as in the diascordium, &c. of the former Edinburgh Dispensatories, viz. one grain in ten scruples.

Tincture of Catechu of the London College:—take of catechu, three ounces; cinnamon, bruised, two ounces; proof-spirit, two pints; digest and strain. The cinnamon, which is omitted by the Edinburgh College, is a very useful addition to the catechu, not only as it warms the stomach, &c. but likewise as it improves its roughness and astringency.

This tincture is of service in all kinds of de-fluxions, catarrhs, loosenesses, uterine fluors, and other disorders where mild astringent medicines are indicated. Two or three tea-spoonsful may

be taken every now and then, in red-wine or an infusion of red roses, or in any other proper vehicle.

Dragon's Blood.—Some writers on the *Materia Medica*, but it is thought without foundation, esteem this drug as a gentle astringent, and it is sometimes prescribed as such against seminal gleet, the fluor albus, and other fluxes. In these cases it is supposed to produce the general effects of resinous bodies, *i. e.* of slightly incrassating the fluids, and strengthening the solids. But the former articles are so much preferable, that it is seldom used in the present practice, either externally or internally, except in the plaster of frankincence, and the compound powder of alum, commonly called *styptic powder*.

Boles.—Many bolar earths beside the Armenian and French boles, were formerly in medicine; they have been recommended as astringent, sudorific, and alexipharmic; but the medical virtues of all of them appear to depend on the simple bolar or argillaceous earth. As this earth is not dissoluble by any fluid that can exist in the bodies of animals, it can act no otherwise than by imbibing, or giving a greater degree of consistence to thin sharp humours in the first passages, and in some measure defending the solids from their acrimony. In consequence of this virtue, the boles may be of some service in alvine fluxes, cardialgic complaints, and in some kinds of acute diseases;

though they are not possessed, as they have been commonly supposed to be, of any truly astringent or absorbent, and much less of any alexipharmic powers. The sensation of astringency which they generally occasion, in some degree, in the mouth, seems to consist only in their adhering to and drying the part, by imbibing the fluids that moisten it. Their dose is from fifteen or twenty grains to a drachm.

The compound powders of bole, formerly prepared with and without opium, (and which were directed to be used instead of the mithridate, diascordium, Venice treacle, &c.) are now omitted; our Colleges having substituted for these powders the preparations of chalk, and the electuary of catechu, mentioned in pages 79, 80, 182, and 183.

For a further account of the operations of absorbent earths, see pages 81, 82, and 83.

ALUM AND BORAX.

ALUM is one of the most powerful astringents; it is in common use for external purposes; against relaxations of the uvula; in gargarisms for spongy scorbutic gums; in epithems and collyria for inflammations and defluxions of the eyes.* In

* Drs. Mead and Lewis, direct alum eurd to be applied for this purpose; it is prepared by boiling two drachms of powdered alum in a pint of cows' milk till the milk is eurdled, and then carefully strain off the whey. They likewise order the whey to be taken internally as an astringent in the diabetes, uterine hæmorrhagies, &c.

this last intention, there is scarcely any application more effectual than the coagulum recommended by Riverius, made by agitating the white of an egg with a lump of alum, till it acquires the consistence of an unguent, which is to be spread on tow, and applied warm to the eyes at bed-time; proper evacuations, if the inflammation is considerable, being premised.

Internally, it is given in small doses of half a grain or less, as a mild corroborant; and in larger ones, as ten, fifteen, and sometimes twenty grains, for restraining immoderate hæmorrhagies. These large doses are never advisable, but in profuse and threatening evacuations; as they are apt to nauseate the stomach, occasion gripes, and leave obstinate constipations of the bowels. The first dose or two sometimes purge a little.

It has been customary to mix alum, for internal use, with an equal, or with half its quantity of dragon's blood; which serves to disguise the alum, and render it, especially when the mixture is made by melting them together, more slow of solution in the stomach, in consequence of which it sits easier, and may be given with less inconvenience in considerable doses; this is, perhaps,

in doses of a quarter of a pint, three or four times a day. This liquor, like other solutions of alum, is unpleasant, and in regard to the dose, uncertain; for a considerable part of the alum is retained in the curd, which tastes rather more strongly aluminous than the whey. The whey may be made more agreeable by the addition of loaf sugar, and dried red rose buds.

the only advantage of the addition of dragon's blood to alum. The Edinburgh College have, in place of dragon's blood, substituted the gum kino, in the proportion of three drachms to one ounce and a half of alum; an alteration which much improves the medicine, as this astringent gum is perfectly soluble in watery menstrua. Dr. Thompson, in the Medical Essays published by a society at Edinburgh, gives an account of the good effects of the former compound in uterine hæmorrhagies; and assures us, that he had never found any medicine so much to be depended on, whether for correcting the too frequent return of the menses, or their too great abundance, for stopping the floodings which women with child are subject to, or moderating the flow of the lochia. In violent bleedings, he gave half a drachm of a mixture of equal parts of the two, every half hour; and seldom failed to suppress the discharge before three or four drachms had been taken. The success of this medicine in these disorders induced him to prescribe it in the fluor albus, and in this also it had excellent effects.

Alum is sometimes employed as a cosmetic; it is also used to give whiteness and weight to bread.*

Dr. Darwin, in his 'Phytologia; or the Philosophy of Agriculture and Gardening,' says, 'the use of alum in making bread consists in its coagulating the mucilage, and perhaps thus contributing to convert it into starch; for the bakers mix it principally with new wheat; and affirm, that it makes the flour of new wheat equal to old.

' Where much alum is mixed with bread, it may be

Compound Alum Water;—take of alum, vitriolated zinc, (white vitriol,) of each half an ounce; boiling distilled water, two pints; pour the water on the salts and strain. This was formerly called '*Bates's Alum Water*;' it is used for cleansing and

distinguished by the eye by a curious circumstance, which is, that where two loaves have stuck together in the oven, they break from each other with a much smoother surface, where they had adhered, than those loaves do which do not contain alum.

'Add to this, that alum is also used by the London bakers for the purpose of clearing the river water, with which they are supplied, which is frequently muddy; and also for instantaneously destroying the volatile alkali, which is said to exist in some London wells, owing to the vicinity of dunghills. These purposes it probably fulfils by coagulating the mucilage, which may occasionally be mixed with the water and support the mud in it; or by uniting with the calcareous earth, or with the volatile alkali which it may contain, and depositing the new-formed gypsum, or its own argillaceous base, the descent of which may carry down other impurities along with it, in the same manner as some muddy wines have been rendered fine, not by filtering them through sand, as then the mud retained on the surface of the sand soon prevents the descent of the wine through it, but by passing clean sand in showers by means of a riddle through the wine. Alum is said to be used by the Chinese for the purpose of cleaning the water of some stagnant reservoirs; and when used in small quantity may, in all these respects, be rather salutary than injurious to the bread of London.'

The following observations on the above, appear in the seventh volume of the '*London Medical Review*:'—'We know not whether we can perfectly agree with the ingenious author, with respect to the salutary effects of alum in bread; and we know, from experience, that such bread is very apt to produce obstinate costiveness.'

healing ulcers and wounds; and for removing cutaneous eruptions, the part being bathed with it hot three or four times a day. It is also sometimes employed cold as a collyrium; and as an injection in the gonorrhœa, and fluor albus, when not accompanied with virulence.

Calcined, or Burnt Alum, as it is called, taken internally, has been highly extolled in cases of colic. In such instances, when taken to the extent of a scruple for a dose, it has been said gently to move the belly, and give very great relief from severe pain.

It is often employed for drying foul ulcers, and consuming proud flesh, which it does with great mildness, but it produces the inconvenience of leaving a hardness upon the part.

Borax;—its medical virtues have not been sufficiently ascertained by experience: it is supposed to be, in doses of half a drachm or two scruples, diuretic, emmenagogue, and a promoter of delivery. Mr. Bisset, in his Essay on the Medical Constitution of Great Britain, recommends a solution of this salt in water, as the most powerful dissolvent yet known, of the apthous crusts (thrush) in the mouth and fauces of children. And for the same purpose also, a small quantity of it is often applied either in the form of powder or syrup, when mixed with sugar, or honey of roses, &c.

There are strong reasons to imagine that the virtues of borax are much greater than they are in

general supposed to be: and that it may be more extensively used with advantage. Dr. Trioen relates, that an ounce and a half of borax having been taken by a young woman, in mistake for cream of tartar, an uterine hæmorrhage succeeded, so profuse, that her life was despaired of: the flux was got under by medicines; but the ill state of health, and almost universal œdema, which followed it, were lasting.

The sub-acid, or sedative Salt of Borax, has been supposed, from the name of sedative, to be a mild anodyne, to diminish febrile heat, to prevent or remove delirium; and to allay, at least for some time, spasmodical affections, particularly those which are the attendants of hypochondriasis and hysteria. It may be given in doses of from two to twenty grains.

IRON, AND ITS PREPARATIONS.

SOFT malleable iron is the only kind fit for internal use, as steel and cast-iron always contain impurities, and often arsenic. Lewis says, (and Drs. Rotheram and Dunean, jun. have repeated his words in their Edinburgh New Dispensatories;) that,—

‘ The general virtues of this metal, and the several preparations of it, are, to constringe the fibres, to quicken the circulation, to promote the deficient secretions in the

remoter parts, and at the same time repress inordinate discharges into the intestinal tube. After the use of them, if they take effect, the pulse is very sensibly raised; the colour of the face, though before pale, changes to a florid red; the alvine, urinary, and cuticular excretions, are increased. Fetid cruetations, and the fæces voided of a black colour, are marks of their taking due effect.

‘ An aperient virtue is usually attributed to some of the preparations of iron, and an astringent to others; but in reality, they all produce the effects both of aperients and astringents, and seem to differ only in degree. Those distinguished by the name of astringent, sometimes occasion a very copious discharge of urine, or a diarrhœa; whilst those called aperient frequently stop these evacuations.

‘ Where either a preternatural discharge, or suppression of natural secretions, proceed from a languor and sluggishness of the fluids, and weakness of the solids, this metal, by increasing the motion of the former, and the strength of the latter, will suppress the flux, or remove the suppression: but where the circulation is already too quick, the solids too tense and rigid, where there is any stricture or spasmodic contraction of the vessels; iron, and all the preparations of it, will aggravate both distempers.

‘ Though the different preparations of iron act all in the same manner, yet they are not equally proper in all constitutions. Where acridities abound in the first passages, the filings or scales, reduced into a fine powder, prove more serviceable than the most elaborate preparation of iron. On the other hand, where there is no acid in the *primæ viæ*, the metal requires to be previously dissolved in some saline menstruum; hence a solution of iron in acid liquors has in many cases excellent effects, where, as Boerhaave observes, the more indigestible preparations, as the calces made by fire, have scarcely any effect at all. If alkalescent juices be lodged in the stomach, this metal, though given in a liquid form, proves at least useless; for here the acid solvent is absorbed by

the alkaline matters which it meets with in the body, so as to leave the iron reduced to an inactive calx.

Chalybeate medicines are likewise supposed to differ, independent of differences in the constitution, according to the nature of the acid united with the metal; vegetable acids superadd a detergency and aperient virtue; combined with the vitriolic, it acts in the first passages as a powerful aperient; whilst the nitrous renders it extremely styptic; and the marine still more so.'

When iron is given improperly or to excess, it produces head-ach, anxiety, heats the body, and often causes hæmorrhagies, or even vomiting, pains in the stomach, and spasms and pains of the bowels.

Iron is administered in most cases of debility and relaxations.

1. In passive hæmorrhagies.
2. In dyspepsia, hysteria, and chlorosis.
3. In most of the cachexiæ.
4. In general debility produced by disease, or excessive hæmorrhage.

The chief preparations of iron are the prepared filings, the rust, and scales from iron; the tincture, the salt, the martial flowers, and the ironated or chalybeate wine.

The Purified Filings, Rust, and Scales of Iron; (now called purified oxide of iron, and which are to be found at the foot of a blacksmith's anvil, and

purified by the application of a magnet;) may be given in doses of from five to twenty grains or more, either in the form of powder, with some aromatic, or made into an electuary or bolus, or pills with any bitter extract. Some have gone as far as a drachm of the rust of iron for a dose, but all the preparations of this metal answer best in small doses, which should be rather often repeated than enlarged.

Salt of Iron or Steel; now called *Vitriolated Iron* or *Sulphate of Iron*.—This is perhaps the most active and useful of the chalybeates; but it is apt to excite pain in the stomach, and spasms in the bowels; and in large doses it causes vomiting. It is administered as a tonic, astringent, and anthelmintic, in doses of from one to three or more grains.

Tincture of Steel with *Spirit of Salt*, now called *Tincture of Muriate of Iron*, or *Tincture of Muriated Iron*,—Is recommended as an excellent preparation; the dose is from ten to twenty drops, repeated two or three times a day, in any proper vehicle. This tincture is spoken of as an effectual remedy to destroy warts when applied daily.

Martial Flowers, now called *Muriate of Ammonia and Iron*, or *Ammoniacal Iron*.—This preparation is supposed to be highly aperient and attenuating; though no otherwise so than the rest

of the chalybeates, or at most only by virtue of the saline matter joined to the iron. It has been found of service in hysterical and hypochondriacal cases, and in distempers proceeding from a laxity and weakness of the solids, as the rickets. From two or three grains to ten, may be conveniently taken in the form of a bolus. The tincture of martial flowers is merely a spirituous solution of them, and is a much less agreeable and active medicine than the simple tincture of muriate of iron: the dose of the tincture of martial flowers, is a tea-spoonful.

Steel or Chalybeate Wine; now called *Wine of Iron*, or *Ironated Wine*.—The dose is from a drachm to half an ounce, repeated two or three times a day. It is given in chlorotic cases.*

Iron Wire—is directed for making the artificial mineral waters, (see page 9,) it is also to be preferred for pharmaceutical preparations, both because it is the most convenient form, and is always made of the purest iron. The purifying of iron filings and scales by a magnet, does not fulfil the purpose for which it is intended, for the adhesion of a very small particle of iron renders brass and

* A preparation for female complaints, (well known in Gloucestershire, &c. through the medium of family recommendation,) invented by the late Dr. Boswell, of Herefordshire, who employed the author to prepare it, by whom it is now sold in *sealed* packets, price 2s. 9d. under the title of ‘Dr. Boswell’s elegant Female Medicine.’

other metals attractable by the magnet ; therefore the only way they can be obtained sufficiently pure, is by filing a piece of pure iron or iron wire with a new file, or one that has been employed in filing iron only.

Aloetic Powder with Iron, (London Pharmacopœia). Take of socotorine aloes, an ounce and a half ; myrrh, two ounces ; dry extract of gentian, and vitriolated iron,* of each one ounce ; reduce them separately to powder, and mix them. This aloetic and chalybeate powder, is given in cases of obstructed menstruation, in doses of from ten grains to a scruple ; similar preparations, but in a more agreeable form, are ordered by Fuller, Lewis, and other pharmaceutical writers, under the title of *ecphratic* or deobstruent pills.

Sydenham observes, that the sickness, perturbation, &c. which this metal, in constitutions where the stomach is weak, or when taken in large doses will occasion, may be in a great measure prevented by lessening the dose, and giving it for

* The vitriolated iron is also directed to be dissolved along with salt of tartar and myrrh, in peppermint or some other simple aromatic water, and given as a draught or mixture. It was much esteemed by the late Dr. Hugh Smith, and by other celebrated physicians. It is now likewise held in great estimation.

Dr. Griffiths's preparation of steel is made with the vitriolated iron and purified soda, which precipitates the iron from the vitriolic acid, into a powder similar to the rust of iron. Perhaps, the above solution of iron with salt of tartar, is equally efficacious.

a time, only at bed-time, in conjunction with a slight opiate and aromatic. He also recommends steel (iron) in substance, and says, that it produces the most lasting and beneficial effects in lax, pale habits, and in chronical disorders proceeding from languor and debility, particularly in *hysterical* and *hypochondriacal* disorders. I have with this intention, prepared *aromatic pearls of steel*, which may be taken in doses from a quarter to a whole tea-spoonful: they also are very useful auxiliaries to the mineral waters or sea bathing.

LEAD, TIN, ZINC, COPPER, AND THEIR PREPARATIONS.

THE effects of lead or saturn, on the body, are emaciation, violent colic, paralysis, tremors, and contractions of the limbs; and as they generally come on gradually, the cause is sometimes overlooked till it be too late. These effects are generally produced by imprudently keeping liquors, pickles, &c. in vessels glazed or lined with lead, or drinking wine, cyder, &c. in which lead has been criminally added to correct its acidity; or among manufacturers who work much with lead, as painters and plumbers. The presence of lead in wine, &c.* may be detected by a common solution of liver of sulphur in water; and still more certainly by evaporating some pints of the sus-

* For the preparations of wine tests, and many other useful recipes for families, &c. see Addenda to Part II.

pected liquor to dryness, and melting the residuum in a crucible, at the bottom of which will be found, (whatever preparation of the metal may have been made use of) the lead in its pure or metallic state, provided the crucible is made sufficiently hot to melt the lead.—See *Macquer's Chemical Dictionary*.

The external application of the preparations of lead, when properly applied, are very useful, on account of their sedative, drying, and repelling qualities.

Litharge of lead, or red and white lead, dissolved or mixed in oils, hog's-lard, and other articles, form the basis of various kind of ointments, plasters, &c.—See Appendix, Part II.

Litharge of lead also forms the much celebrated *Goulard's extract*, or *extract of saturn* or *lead*, now called in our Dispensatories, WATER ! of acetated litharge. It is thus prepared: take of litharge, two pounds and four ounces; distilled vinegar, one gallon; mix, and boil to six pints, constantly stirring; then set it aside. After the feces have subsided, strain. This preparation* is chiefly em-

* Chaptal, a very eminent French chymist, observes, ' This extract is likewise used to clarify liquors, and to deprive brandies of their colour; an evil practice which has been common for some years at Sette, though prohibited under heavy penalties. The wine merchants avail themselves of this composition but too often, or of litharge, to render their sour wines sweet. This fraud was prodigiously common at Paris in the year 1750; and it was proved that, in the interval of three years, thirty thousand muids of vinegar had been thus sweetened, and

ployed in making *Goulard's lotion*, formerly called *vegeto mineral water*, and now mentioned in some of our Dispensatories or Pharmacopœias, under the title of the *compound liquor of acetated litharge*; is made by mixing a drachm of the water (*vinegar*) of acetated litharge and an equal quantity of proof-spirit with a pint of *distilled water*; hard or pump water precipitating the lead in the form of a white powder, which is cerusse or white lead. The above water is in general use against inflammations, &c. But these preparations do not differ from solutions of the same strength, made with sugar of lead; and are, according to Duncan, less proper, as their strength is apt to vary. The addition of the drachm of spirit to the above lotion, is intended to prevent its decomposition; it also renders it slightly stimulant: the extract is directed to be first mixed with the spirit, and then add the pint of distilled water.

Sugar of Lead, now called *Acetite of Lead* by the Edinburgh, and *Acetated Ceruse*, by the London and Dublin Colleges. This sugar or salt of lead, has a sweet styptic taste; its internal use, notwithstanding the encomiums some have been rash

sold for wine.'—He also says, 'Lead in substance is used in the tinning of copper vessels. This is a pernicious fraud supported by custom, and tolerated by the want of vigilance in the police. It is the more dangerous from the circumstance that fats, oils, and vinegar corrode or dissolve lead, which by that means becomes mixed with the aliments.'

enough to bestow on it, is entirely to be rejected. It forms, however, a very valuable external application in phlegmonic inflammations, bruises, and diseases of the skin. It is also improperly and destructively used in the empirical nipple-liniment, cosmetic* lotions, &c.—See page 157.

Cerusse, or White Lead; now called White Oxide of Lead;—is also in common use as a cosmetic; notwithstanding the frequent admonitions of medical writers, to the contrary. It is likewise frequently employed for drying up habitual moisture of the skin, and is, no doubt, the unsuspected cause of gripes, convulsions, and even DEATH of infants, by being used as a *dusting powder*.

Compound Powder of Cerusse of the London Pharmacopœia;—take of cerusse, five ounces; sarcocoll or flesh-glue, (a concrete juice of the gummy kind,) an ounce and a half; tragacanth, half an ounce; powder them together. This is employed for external purposes, as in collyria, lotions, and injections for repelling acrimonious

* Lead, used as a cosmetic, eventually defeats its own intention, inasmuch as it deadens and obstructs the pores of the skin, and thus stops the natural circulation and secretions, whereby head-ach, tooth-ach, tremors, and many other nervous affections ensue; but should these not immediately happen, through the strength of youth or constitution, it certainly will produce the appearance of *old age*, by causing *yellowness, wrinkles, &c.*

humours, and in inflammations ; but for all these purposes it is very inferior to solutions of acetite of lead.

Tin is employed in medicine only as an anthelmintic, and particularly for the tape worm, or those of the flat kind. The Edinburgh College orders the use of the filings, supposing tin to act mechanically only, while the Colleges of London and Dublin direct tin in powder to be used. The general dose is from a scruple to a drachm ; some confine it to a few grains. But Dr. Alston assures us, in the Edinburgh Essays, that its success depends on its being given in much larger quantities. He directs an ounce of the powder to be mixed with four ounces of molasses, and taken early in the morning, or on an empty stomach ; next day, half an ounce ; and the day following, half an ounce more of the tin is to be taken ; after which a brisk cathartic is administered. He says the worms are usually voided during the operation of the purge, but that pains of the stomach occasioned by them are removed almost immediately upon taking the first dose of the tin.*

Zinc is a powerful agent in the phenomena of galvanism : the following are its officinal prepara-

Blaine's Powder for the distemper in dogs, according to Duncan, is the *Sulphuretted Oxide of Tin*, or sulphur combined with calcined tin ; and is said to be sometimes successfully made use of.

tions: *tutty*, or *impure oxide of zinc*; this is celebrated as an opthalmic, and frequently employed as such in unguents and collyria.

Calamine, or *impure Carbonate of Zinc*.—The prepared lapis calaminaris, or calamine stone, is well known, as giving name to the *calamine*, or *epulotic cerate*; called from the name of its inventor, *Turner's Cerate*, and also *Brown Cerate*. Powdered calamine is used in collyria as an absorbent, against defluxions of thin acrid humours upon the eyes, for running ulcers, and for healing excoriations. It may be safely applied as a dusting powder for infants, in the room of white lead.

White Vitriol, now called *Vitriolated Zinc*, or *Sulphate of Zinc*;—is sometimes given, from five or six grains to half a drachm, as an emetic; it operates very speedily, and, if pure,* without violence. It is perfectly safe. Externally it is employed as an opthalmic, and often made the basis of collyria, both in extemporaneous prescription and in Dispensatories.

White vitriol vomits, on account of their operating almost instantly, are directed to be given in

* The common white vitriol of the shops is never pure; but always contains iron, copper, and a little lead. The most ready means directed for purifying it are by exposing it in solution to the air, by which means red oxide of iron is precipitated, and by digesting it upon pure zinc, which precipitates the other metals.

cases where poison has been swallowed. By employing purified white vitriol internally, in doses of one or two grains, it acts as a tonic; and some think it in every case preferable to the flowers of zinc.

Solution of White Vitriol, now called *Sulphate* or *Vitriolated Zinc*.—Take of white vitriol, sixteen grains; water, eight ounces; diluted (weak) vitriolic acid, sixteen drops; dissolve the vitriol in the water, then having added the acid, filter through paper. This solution is of a strength proper for injecting into the urethra in gonorrhœa, or applying to the eyes in chronic ophthalmia.

Water of Vitriolated Zinc with Camphor.—Take of white vitriol, and camphorated spirit, of each half an ounce; boiling water, two pints; mix and filter through paper.

It is used externally as a lotion for some ulcers, particularly those in which it is necessary to restrain a great discharge. It is also not unfrequently employed as a collyrium in some cases of ophthalmia, where a large discharge of watery fluid takes place from the eyes with but little inflammation; but when it is to be applied to this tender organ, it ought first to be diluted by the addition of more water.

Solution of Acetite of Zinc.—Take of vitriolated zinc, a drachm; distilled water, ten ounces; dissolve,

Take of acetite (sugar) of lead, four scruples; distilled water, ten ounces; dissolve.

Mix the solutions; let them stand at rest a little, and filter the liquor. The solution of acetite of zinc, is with many practitioners deservedly much esteemed as an astringent collyrium and injection.—See Surgery.

Flowers of Zinc, now called *Oxide of Zinc* by the Edinburgh, *Calcined Zinc* by the London, and *Calx of Zinc* by the Dublin College. They have, of late, been administered internally; in doses from one to seven or eight grains, they have been much celebrated in the cure of epilepsy and several spasmodic affections: and there are sufficient testimonies of their good effects, where tonic remedies in those affections are proper.

Flowers of zinc are applied externally as a detergent and exsiccant: and when mixed with twice their weight of fresh hog's lard, form an excellent ointment for deep chops or excoriated nipples, &c.

Copper has a more perceptible smell and taste than almost any other metal. Its effects when taken into the stomach are highly deleterious, and often fatal. It particularly affects the primæ viæ, exciting excessive nausea, vomiting; colic pains, and purging, sometimes of blood, or, though more rarely, obstinate constipation. It also produces agitation of the mind, head-ach, vertigo, delirium; renders the pulse small and weak, the countenance pale, and causes fainting, convul-

sions, paralysis, and apoplexy. When any of these symptoms occur, we must endeavour to obviate the action of the poison* by large and copious draughts of oily and mucilaginous liquors, or to destroy its virulence by solutions of potass,

* Verdigris, or the rust of copper, boiled with honey and vinegar, called *Ægyptiacum*, *Honey*, or *Oxymel of Verdegris*; is used externally for cleansing foul ulcers, and keeping down fungous flesh; it is also often serviceable in venereal ulcerations of the mouth and nostrils: but there is some danger from its application to places from the situation of which it is apt to be swallowed; for even a small quantity of verdegris passing into the stomach may be productive of distressing, if not deleterious effects.

Poisoning from copper is most commonly the effect of ignorance, accident, or carelessness; and too many examples are met with of fatal consequences ensuing upon eating food which had been dressed in copper vessels not well cleaned from the rust which they had contracted by lying in the air; or pickles, to which a beautiful green colour had been given, according to the murderous directions of the most popular cookery books, by boiling them with halfpence, or allowing them to stand in a brass pan until a sufficient quantity of verdegris was formed.

Great care ought to be taken that acid liquors, or even water, designed for internal use, be not suffered to stand long in vessels made of copper; otherwise they will dissolve so much of the metal as will give them dangerous properties. But the radical preventive of these accidents is to banish copper utensils from the kitchen and laboratory. The presence of copper in any suspected liquor is easily detected by inserting into it a piece of polished steel, which will soon be coated with copper, or by dropping into it some spirit of sal ammoniac, which will produce a beautiful blue colour if any copper be present.

or any weak solution of an alkaline salt, as ley from wood ashes, salt of tartar, &c. ; or a solution of liver of sulphur or sulphuret of potass.

Blue Vitriol, now called *Sulphate of Copper*.—

This metallic salt, like the other preparations of copper, acts, in doses of a few grains, as a most virulent emetic. Its use is chiefly external, as a detergent, escharotic, and for restraining hæmorrhagies : for which last intention, a strong styptic liquor is directed to be prepared, by dissolving three ounces of blue vitriol, and three of alum in two pints of water, then adding one ounce and a half of the strong acid or oil of vitriol, and filtering the mixture for use.

Blue vitriol has been exhibited internally, in incipient consumption of the lungs, intermittent fever, and epilepsy ; but its use in these cases is accompanied with danger : however, according to Aikin, it has of late been considerably employed as an emetic by several eminent practitioners, and is said to be by no means an unsafe one, as it operates the instant it reaches the stomach, before it has time to injure by its corrosive quality. The peculiar advantage in using it is represented to be, that it has no tendency to become also purgative, and that its astringent power prevents the tone of the stomach from being impaired after vomiting with it. It is much recommended in the early state of tubercles in the lungs ;* and the

* See Dr. Simmons, on the treatment of consumption.

following method of exhibition is directed : let the patient first swallow about half a pint of water, and immediately afterwards, the vitriol dissolved in a small cupful of water. The dose may be varied according to age, constitution, &c. from two grains to ten, or even twenty ; always taking care to begin with small ones. After the emetic is rejected, another half pint of water is to be drunk, which is likewise speedily thrown up, and this is commonly sufficient to remove the nausea.

Blue vitriol, given as a dry vomit, is much recommended in *Marryat's Art of Healing*.

ANTIMONY AND ITS PREPARATIONS.

ANTIMONY was employed by the ancients in collyria, against inflammations of the eyes, and for staining the eye-brows black. Its internal use was established about the fifteenth century, and at that time, it was looked upon by many as poisonous ; but experience has now fully evinced, that in its crude state, or when duly prepared, it is a medicine of sufficient safety, and of great efficacy in sundry obstinate disorders, and that though some of its preparations are most violently cathartic and emetic, yet even these, by a slight alteration or addition, lose their virulence and become mild.

Antimonial medicines are principally made use of as alterants, deobstruents, or gentle evacuants, in cutaneous (not scorbutic) foulnesses, in rheu-

matic pains, and contractions of the limbs;* in leucophlegmatic, cachectic, and catarhous disorders; in intermittent fevers from obstructions of the viscera, as obstinate quartans; and sometimes in continual fevers, and for promoting expectoration in peripneumonic and asthmatic cases: they generally have better effects in cold serous habits, than in hot bilious dispositions. The more active preparations are employed as emetics in apoplectic and maniacal disorders. It is observable, that even the strongest antimonials, the caustic solutions in mineral acids excepted, are given to horses in large quantities, some ounces a day, without any ill effect: in these animals, both crude antimony and its preparations seem to operate by promoting perspiration. The pure metal, called *regulus* of antimony, is a medicine of extreme activity: a quantity too minute to be sensible of the nicest balance, is capable of producing violent effects if given dissolved, or in a soluble state. Acid wines take up so little of it, that the metal, after a number of infusions, seems to have lost nothing of its weight: these tinctures, nevertheless, prove, in moderate doses, strongly emetic or cathartic; and in very small ones, for the most part diaphoretic. The *regulus* has been cast into the form of small pills, which acted as

* Two remarkable cases of the efficacy of antimony in pains and in inveterate contractions of the limbs, are related by Kunckel, in his work called '*The Chymist's Laboratory*.'

violent cathartics, and after their passage through the body, have operated in the same manner again, and this repeatedly for a great number of times. The precise gradations of activity, between the virulence of this metal in its perfect metallic state, and its indolence in that of a perfect calx, are not well known; but thus much is certain, that it continues extremely active till the calcination is almost complete.

The activity of the metal is restrained likewise by the combination of sulphur with it. Crude antimony, a natural mixture of it with sulphur, is altogether mild; doses of half a drachm, or a drachm, for the most part only gently loosening the belly, or promoting insensible perspiration: the greater degree of fineness the powdered mineral is reduced to, the more considerable are its effects; and the case appears to be the same in regard to all the antimonials that are not totally dissoluble in the animal fluids.

Golden Sulphur of Antimony, Precipitated Sulphuret of Antimony of the Edinburgh, *Precipitated Sulphur of Antimony* of the London, or *Orange Antimoniated Sulphur* of the Dublin College.—It proves emetic on an empty stomach, in a dose of four, five, or six grains; but it is seldom prescribed with this intention, being chiefly used as an alterative deobstruent, particularly in cutaneous and venereal complaints. Its emetic quality is easily blunted, by making it up into pills with resins or extracts, and giving them on a full

stomach: with these cautions, it has been taken in the quantity of sixteen grains a day, and continued for a considerable time without occasioning any disturbance upwards or downwards. It should, however, as its strength is precarious, be given at first in small doses, and increased by degrees, according to the effect produced. It is employed in the following recipe of the Edinburgh College, and is also combined with opium and resin of guaiacum, for certain venereal affections.—See the note to guaiacum, page 44.

Compound Pills of Calomel, commonly called *Plummer's Pills*.—Take of precipitated sulphur of antimony, prepared calomel, each six drachms; extract of gentian, white Spanish soap, each two drachms. Let the calomel be triturated with the sulphur of antimony, till they are thoroughly mixed, then add the extract and soap, and form it into a mass. The dose is from five to twelve grains twice a day. These pills were first recommended about sixty years ago, by Dr. Plummer, whose name they still bear, and are found to be a powerful, yet safe, alterative in cutaneous disorders; they have also completed cures in venereal cases after salivation has failed.—See the author's Medical Pocket Book.*

* This book, besides plain and comprehensive directions, adapted to different constitutions and climates, for the treatment and cure of the venereal disease in all its stages, contains the late Mr. John Hunter's preservative, with instructions for preparing and applying

Kermes Mineral, or Brown Antimoniated Sulphur* of the Dublin Pharmacopœia. This preparation

the same; also Dr. Astruc's very valuable rules for distinguishing scorbutic from venereal eruptions; and Mr. Blair's (surgeon to the Lock Hospital) directions, &c. for taking the nitric acid, and of its use in removing *secondary* venereal affections.

For the purpose of concealment, it is printed in a very small pocket size, and can be had of the author only, price five shillings.

* There are also excrescencies or grains of this name, formed by insects, on the branches or leaves of the scarlet oak. These grains are brought to us from the south of France, previously cured by sprinkling them with vinegar before drying. Kermes is, according to the opinion of several writers, proper for exhilarating the spirits, and against palpitations of the heart; it has also been, perhaps without foundation, particularly recommended for promoting delivery, and preventing abortion.—See *Chaptal's Chemistry*, Vol. III.

The expressed juice from fresh kermes, or a syrup made from it, are also brought over from France, and likewise an elegant cordial confection, the preparation of which is thus described in Aikin's *Materia Medica*: dissolve, in a water bath, six ounces of fine sugar in an equal quantity of damask rose water; then add three pounds of the juice of kermes warmed and strained; and after the whole has grown cold, mix in half a scruple of oil of cinnamon. Dose: from a scruple to a drachm or more, either by itself, or in juleps or draughts. The present practice, however, employ none of the preparations of kermes.

Macquer observes, that, kermes communicate a red colour to water, and to spirit of wine. Woollen cloth, previously dipped in a solution of alum, and of tartar in water, receives from a decoction of kermes, a more durable, but less vivid, scarlet dye than that usually procured from cochineal, together with a solution of tin.

of antimony is chiefly used on the Continent; it is a very active substance, apt to excite vomiting, and in some other respects producing somewhat similar effects with the golden sulphur of antimony. The dose to adults, according to Duncan, is a grain, or a grain and a half; but Macquer says, ' three or four grains is seldom emetic, and that singularly excellent effects may be produced from it when administered by able physicians. In it are united the exciting and evacuant virtues of the emetic preparations of antimony, with the tonic, dividing, aperitive, and resolving properties of the liver of sulphur; that is to say, that kermes is capable of answering two principal indications in the treatment of many acute and chronic diseases; properly managed it may become an emetic, a purgative, a diuretic, a sudorific, or an expectorant, as is required; and it is always attenuating and resolving. When seven or eight grains is taken at once, it chiefly acts upon the *primæ viæ*, generally as an emetic, and as a purgative. A dose of three or four grains is seldom emetic, but frequently purgative; when it is administered in smaller doses, it passes almost entirely into the lacteal, blood, and lymphatic vessels, and increases all secretions and excretions, particularly those of urine, sweat, and expectoration; according to the dose, the nature of the complaint, and the disposition of the patient.

It produces singularly good effects in those

diseases of the breast which proceed from fullness, and obstruction.

Kermes may be administered in linctuses, in oily or in cordial potions, in any vehicle; or incorporated in a bolus, with other suitable remedies. One precaution, hitherto little observed, is very necessary, that is, not to join it with acid matters, if it be intended to act as kermes. Anti-acid and absorbent substances ought to be joined with it, if the patient have an acid in the *primæ viæ*, or an acescent disposition; for as these acids saturate the alkali by which the kermes is rendered an antimoniated liver of sulphur, and by which alone it differs from golden sulphur of antimony, they accordingly render the kermes entirely similar to the golden sulphur of antimony, the properties of which are very different from those of kermes.

The fame of kermes was occasioned by Friar Simon, apothecary to the Chartreux Friars. The friar received this preparation from a surgeon called La Ligerie, who had procured it from a German apothecary, formerly a scholar of the famous Glauber. Friar Simon, from the commendations given to this new remedy by La Ligerie, administered it to a Chartreux Friar, who was dangerously ill of a violent peripneumony, by which the Friar was suddenly, and as it had been miraculously, cured. From that time the Friar apothecary published the virtue of his remedy. Several other remarkable cures were performed by means of kermes. The public believed in its

medicinal qualities, and called it *Powder of Char-treux*; because it was prepared only in the apothecary's shop belonging to these monks. The reputation of kermes extended itself more and more; till at length the Duke of Orleans, then Regent of France, procured the publication of the process by La Ligerie.

Panacea of Antimony, of Lewis's, and of the Edinburgh Dispensatories.—This preparation is supposed to have been the basis of Lockyer's pills, which were formerly a celebrated purge. Ten grains of it, when in fine powder, being mixed with an ounce of white sugar candy, and made up into a mass with mucilage of gum tragacanth, and divided into an hundred pills, of which, one, two, or three, taken at bed-time, are said to work gently by stool and vomit.

For an account of *emetic tartar*, *antimonial wine*, and *powder*, see the beginning of this work.

Antimonials, in small doses, generally produce nausea and sweat; in large doses full vomiting and purging. Some alledge that antimonials are of most use in fevers when they do not produce any sensible evacuation, as is the case sometimes with the antimonial or James's powder. They therefore prefer it in typhus or nervous fever, and emetic tartar in the more inflammatory fevers, in which there is the appearance at first of more activity in the system, and more apparent cause for evacuation.

QUICKSILVER (MERCURY)—AND ITS PREPARATIONS.

QUICKSILVER is often adulterated with bismuth, lead, tin, or other metals, which renders it unfit for internal use, and for many preparations; it is therefore directed to be purified by distillation.*

Mercury taken into the stomach in its metallic state has no action on the body, except what arises from its weight or bulk. It is not poisonous as was vulgarly supposed, but perfectly inert. Mead, in his *Mechanical Account of Poisons*, says, there are examples of its having been lodged, for years, in cavities both of the bones and of the fleshy parts, without having injured or affected them. Taken in the quantity of an ounce or two, it soon passes through the intestinal tube, unchanged and unfelt: hence some have been induced to give a pound or more in violent constipations, hoping that this innocent fluid, by its great weight and slipperiness, would force open ob-

* The purity of quicksilver may be known by observing, that it does not soil clean white paper; that it has no pellicle on its surface; that when triturated with water, it does not soil the water; that when exposed to fire in an iron spoon or ladle, it does not crackle; and lastly, that it is perfectly and entirely soluble in pure spirit of nitre, without any deposition. Mercury may be cleansed from dust, by straining it through shammy leather; from grease, by washing it with an alkaline lixivium; and from any alkaline matter by vinegar.

structions, that had resisted the common methods of cure by purgatives, relaxants, and emollients. This practice, it seems, has not been attended with any remarkable success; nor do the principles, on which mercury has been given in these cases, appear to be just. The slipperiness of this fluid consists only in the mobility of its own parts, not in any power by which it can lubricate the vessels of an animal. Its weight can be of no use, unless where the obstruction lies in some descending part of the tube; and even supposing it to act perpendicularly, to the greatest advantage, there is room to fear, that the pressure of a pound or two will rather distend the superior part of the intestine, than be able to force a passage through the obstinate obstructions against which it is recommended.

When mercury is resolved into fume, or altered in its form by fire, or combined with a small portion of mineral acids, or otherwise divided into minute particles, and prevented from reuniting by the interposition of proper substances, it operates with great power, and extends its action through the whole habit. In these forms, whether taken internally, or introduced into the blood from external application, it seems to liquify all the juices of the body, and may be so managed as to promote excretion through all the emunctories. If its power be not restrained or determined by additions, it tends chiefly to affect the mouth; and having fused the humours in the remoter vessels, occasions a plentiful evacuation of them from the

salival glands, with considerable swellings, inflammations, and ulcerations of the parts. The salivation is accompanied with a diminution of most of the other discharges, and an increase of these diminishes the salival flux.

The salutary effects of mercurials have in many cases, very little dependence on the quantity of sensible evacuation. Venereal maladies, and chronical distempers proceeding from a viscosity of the humours and obstruction of the small vessels, are often successfully cured by mercurials, taken in such doses as not to produce any remarkable discharge, especially if assisted by diaphoretics and a warm diluting regimen. In this view, camphor, and the resin or extract of guaiacum, are frequently joined to the mercury; and to the more active preparations, a little opium; which not only promotes the diaphoresis, but prevents the mercury from irritating the first passages, and running off by the grosser emunctories.

This appears to be, in general, the most advantageous method of using mercurials; excepting, perhaps, only in venereal maladies of long standing, or such as have arisen to a great height, or have affected the bones; which demand, for the most part, a full ptyalism. In these cases, the disease has been subdued for a time by the alterative method, but afterwards broken out a fresh, and been completely cured by salivation: and, on the other hand, some cutaneous foulnesses, after resisting salivation, have yielded to an alterative course. Though mercurials are found

to be salutary in sundry cutaneous defecations, and impurities of the blood and juices, vulgarly called scorbutic; they are always pernicious in the true scurvy, and dangerous in constitutions inclining to this disease, where the humours are acrimonious and colliquated, and disposed to a putrescent state. In such circumstances, mercurial medicines are apt to operate with violence: small doses have occasioned high and lasting salivations. The removal of these accidents is to be attempted by clysters, purgatives, diaphoretics, or such other means, consistent with the patient's strength and the particular symptoms, as may procure a speedy revulsion from the salival ducts.

A long continued use of mercury is in no case free from danger, as it manifestly colliquates the whole mass of blood, and tends to weaken the nerves, so as to bring on tremors and paralysis. The miners, and those who are exposed to the fumes of mercury in extracting it from the ore, are said to be almost always, sooner or later, seized with these kinds of complaints; to become generally in a few years paralytic, and at last to die hectic.

Mercurials are destructive to insects, perhaps of every kind. They are sometimes given internally against worms; and sometimes applied externally in unguents, for destroying cutaneous animalcula. The itch, now reckoned an animalcular disease, is sometimes cured by mercurial unguents; which, nevertheless, cannot be depended on for this effect, unless in slight cases; as

their antipsoric efficacy seems to reach no further than those parts of the skin to which they are applied, and as they cannot with safety be applied freely, to any great extent of the body, particularly of the trunk.

Mercury has been of late recommended as an effectual antidote against the poison of the mad dog. Several cases are related, by Drs. James, Desault, and Du Choisel, both of brutes and human subjects, bitten by mad dogs, being preserved from the usual consequences of this bite, by mercurial unctions, and mercurials taken internally. There are some instances given also of a cure being obtained, by the same means, after symptoms of madness had appeared.—See *James's Treatise on Canine Madness*.

Quicksilver, triturated with powdery or with thick unctuous matters, is gradually divided, and incorporated with them into one uniform compound, in which no particle of the mercury can be distinguished by the eye. It is most difficultly mixed with earthy powders, most easily with thick balsams and mucilages.

Killed or extinguished, *i. e.* ground till the mercurial globules disappear, with one twelfth its weight or more of Venice turpentine, or half that quantity of balsam of sulphur, it is mingled with plasters; which, for this purpose, are to be melted, and taken from the fire before the mercury is stirred in. The College of London directs the mercury, killed with balsam of sulphur, to be mixed with four times its quantity of the common

plaster, (litharge plaster with quicksilver,) or of gum ammoniacum : (plaster of gum ammoniacum with quicksilver.) These compositions are applied as resolvents and discutients, against venereal pains, and indurations of the glands; the mercury exerting itself in some degree upon the part, though it is rarely introduced into the blood in such quantity as to affect the mouth. Astruc observes, that even by covering all the limbs with mercurial plasters (the method once practised for raising salivations) it was difficult to obtain a complete and effectual ptyalism.

Substances of less consistence, as ointments, leave the mercury at more liberty to act; and are generally and deservedly preferred to the plasters, in the intention of topical resolvents, &c. as well as in that of conveying the mercury into the habit. A drachm of quicksilver mixed with unguents, well rubbed into the skin, and repeated every day, or rather every other day, generally produces, soon after the third application, and sometimes after the second, appearances of inflammation in the mouth, which are followed by a free and copious ptyalism: those employed in rubbing the ointments on others, have been salivated by the mercury imbibed through the palms. The ptyalism raised by unction is often more effectual, and accompanied with fewer inconveniencies, than that produced by mercurials taken internally; which last are apt, in some constitutions, to run off by the intestines, without affecting the salival glands; and in others, to affect the mouth so

hastily, as to excite a copious salivation without extending their action sufficiently to the remoter parts. The mercurial ointments are commonly prepared by rubbing the mercury with lard or other fat matters of a due consistence: three parts of hog's lard, and one of mutton suet, make a commodious basis, with which may be mixed one part or more of quicksilver. Or the hog's lard may be mixed in much greater proportion to the suet, as twenty-three parts of the former to one of the latter, for an equal weight of quicksilver; which may occasionally be lowered by adding twice its weight of hog's lard. Mercury is divided also with different materials for internal use, and given, as an alterative and as an anthelmintic, from two or three grains to eight or more. Half a drachm of quicksilver is ground, for example, with two scruples and a half of prepared chalk; but the absorbent earths, by destroying acid in the alimentary canal, will diminish the activity of the mercury. This preparation, formerly called *alkalised mercury*, is now seldom employed. The Colleges now direct the following formulæ for the mercurial or blue pills. The Edinburgh mercurial pills are thus prepared: take of purified quicksilver, and conserve of red-roses, of each one ounce; starch, two ounces; triturate the quicksilver in a glass mortar, till the globules completely disappear, adding occasionally a little mucilage of gum arabic; then add the starch, and beat with a small quantity of water into a mass, which immediately divide into four hundred and eighty

pills. The London College orders of purified quicksilver, two drachms; conserve of roses, three drachms; liquorice, finely powdered, one drachm; well mix as above-mentioned, and then form into a mass proper for pills. The Dublin College directs equal parts of quicksilver and extract of liquorice to be rubbed with half the quantity of liquorice powder, previously reducing the extract with warm water, to the consistence of honey, and triturating it with the mercury until its globules disappear entirely; then add the liquorice powder, and form it, if required, with a little water into a mass. Either of these preparations, now called *common mercurial pills*, may, in general, supersede most other forms of this medicine: their dose must be regulated by circumstances—from two to six five-grain pills may be given daily. One grain of quicksilver is contained in four grains of the Edinburgh mass; in three of the London; and in two and a half of the Dublin.

Acetie, or Acetated Quicksilver.—This is a salt formed by the combination of the acetous acid with mercury, which was thought to be extremely difficult, if not impossible, till lately; it is supposed to be much milder than any other saline preparation of quicksilver, and is the basis of the celebrated *Keyser's pills*; and so great was its reputation, that the secret was purchased by the late King of France, and directions for preparing it published by authority. Dose: a grain, night and morning. A solution of acetated quicksilver

has also been recommended externally, to remove freckles and cutaneous eruptions.

Corrosive Sublimate, now called *Muriate of Quicksilver*, *Muriated Quicksilver*, or *Corrosive Muriated Quicksilver*.--This is one of the most violent poisons. Externally it acts as an escharotic, or a caustic; and in solution it is used for destroying fungous flesh, and for removing herpetic eruptions; but it requires great caution. It has, however, been recommended to be given internally, by the respectable authorities of Boerhaave and Van Swieten; and is the active ingredient of all the empirical antivenereal syrups, &c. Were it really capable of curing the venereal disease, or equal in efficacy to the common modes of administering mercury, it would possess great advantages over them in many respects: but that it cannot be depended on, is almost demonstrated by its use, as an antivenereal, being confined to the quacks, and by the testimony of the most experienced practitioners. Mr. Pearson, senior surgeon of the Lock Hospital, says, that it will sometimes cure the primary symptoms of syphilis, especially if it produce considerable soreness of the gums, and the common effects of mercury; but that it will often fail in removing a chancre; and where it has removed it, that the most steady perseverance will not secure the patient from a constitutional affection. It is on some occasions, however, an useful auxiliary to a mercurial course, in quickly bringing the system

under the influence of mercury, and in supporting its action after the use of frictions, and is peculiarly efficacious in relieving venereal pains, in healing ulcers of the throat, and in promoting the desquamation, (scaling off) of eruptions.

Ample directions, both for the detection and cure of this poison, will be given under the head—*Treatment of Mineral Poisons*.—See Part II.

Sweet Mercury, now called *Submuriate of Mercury*, *Mild Sublimated Muriated Mercury*, and *Calomel*.—This, of all mercurial preparations, is the most important in medicine, and is capable of curing syphilis in every form. It also produces very powerful and salutary effects in obstructions and chronic inflammations of the viscera, especially of the liver; and is, in general, applicable to every case in which mercurials are indicated. Its dose, according to the different circumstances under which it is employed, varies from an eighth of a grain to ten or more grains. It ought never to be given in solution.

For a further account of calomel, see pages 5, 6, and 7.

Ash-coloured Powder of Mercury, now called *Ash-coloured Oxide*, or *Powder of Quicksilver*.—This has lately been recommended by Dr. Home, and others, as one of the most efficacious and permanent of antisyphilitic remedies. The dose, according to Murray, is one grain; but Dr. Rotheram, in his *Edinburgh New Dispensatory*,

says, it may be given in a bolus in the quantity of from one to six or seven grains: the dose being gradually increased according to its effects.

Calcined Quicksilver has been by some greatly esteemed in confirmed syphilis, which has appeared to oppose other mercurial preparations. It is greatly disposed to irritate the first passages, and occasion gripes; to prevent which, a small quantity of opium, and some warm aromatic, are commonly joined to it. Its dose is from half a grain to two grains.

Turpeth Mineral, now called *Yellow Subsulphate of Quicksilver*, or *Vitriolated Quicksilver*,—when given to adults, in doses of from five to eight grains, operates very briskly as an emetic, and more copiously than many of the safer emetics; its action, however, is not confined to the primæ viæ; it will sometimes excite a salivation, if a purgative be not taken soon after it. Turpeth mineral is employed chiefly in virulent gonorrhœas, and other venereal cases, where there is a great flux of humours to the parts. It is also said to have been used with success, in robust constitutions, against leprous disorders, and obstinate glandular obstructions; and, in doses of a grain or two, as an alterative and diaphoretic. Dr. Hope, senior, has found, that in doses of one grain, mixed with a little liquorice powder, it is the most convenient errhine he has had occasion to employ. This medicine was lately recommended as the

most effectual preservative against the hydrophobia, but it is scarcely at present made use of, it being almost generally considered as a superfluous preparation, whose place may be more safely supplied by other mercurials or emetics.

Æthiops Mineral, now called *Black Sulphurated* or *Sulphuret of Quicksilver*, or *Quicksilver with Sulphur*.—This preparation is the least active of all the mercurials; it is principally given as an alterative in glandular affections, and in cutaneous diseases, in doses of from five to ten grains; but even in doses of several drachms, and continued for a considerable length of time, it has scarcely produced any sensible effect.

Factitious Cinnabar, or *Red Sulphurated Quicksilver*,—is chiefly used to fumigate venereal ulcers in the nose, mouth, and throat. Mr. Pearson, from his experiments on mercurial fumigation, concludes, that where checking the progress of the disease suddenly is an object of great moment, and where the body is covered with ulcers or large and numerous eruptions, and, in general, to ulcers, fungi, and excrescencies, the vapour of mercury is an application of great efficacy and utility; but that it is apt to induce a ptyalism rapidly, and great consequent debility, and that for the purpose of securing the constitution against a relapse, as great a quantity of mercury must be introduced into the system, by inunction, as if no fumigation had been employed.

Red Precipitated Mercury, now called *Red Oxide of Quicksilver by Nitric Acid, Red Nitrated, or Sub-Nitrated Quicksilver*.—It is employed in powder, or with a small quantity of ointment, as an escharotic. One part of red precipitate, finely levigated and mixed with eight parts of simple ointment or cerate, forms an excellent stimulating application, of very great service in indolent ill-conditioned sores, when we wish to excite them to greater action. If it prove too stimulating, it may be made weaker by adding more of the ointment or cerate; and in this state it is often applied to the eye-lids in chronic ophthalmia.

White Precipitated Mercury, now called *White Calx of Quicksilver, or Sub-Muriate of Quicksilver and Ammonia*.—This preparation is only used, and chiefly on account of the elegance of its colour, in ointments, for the itch—and some other cutaneous eruptions; one part of white precipitate, and twelve of the simple ointment or pomatum, make the common mercurial application for these complaints.

Mild and Strong Citrine, or Yellow Mercurial Ointments, now called *Ointments of Nitrated Quicksilver*.—The stronger ointment is prepared with one part quicksilver, two parts nitrous acid, and twelve of hog's lard. The milder ointment has three times the quantity of lard to the above proportions of quicksilver and nitrous acid; and although the activity of the nitrated quicksilver is

very considerably moderated by this addition of animal fat, yet it is still a very active ointment, and, as such, is frequently employed with success in cutaneous and other topical affections; but it is apt to excoriate and inflame the parts: on this account, a reduction of its strength is sometimes requisite; and it is often also necessary, from the hard consistence which it gradually acquires, in consequence of the action of the acid on the lard.

Mercury occasionally attacks the bowels, and causes violent purging, even of blood. This effect is remedied by intermitting the use of the medicine, and by exhibiting opium. At other times it is suddenly determined to the mouth, and produces inflammation, ulceration, and an excessive flow of saliva. In this case, too, the use of the mercury must be discontinued for a time; while, according to Mr. Pearson's advice, the patient should be freely exposed to a cold dry air, with the occasional use of cathartics, Peruvian bark, mineral acids, and the assiduous application of astringent gargles. On the other hand, the sudden suppression of ptyalism is not without danger. It is most frequently caused by cold liquids being taken into the stomach, or exposure to cold and moisture, while under the influence of mercury. The danger is to be obviated by the quick introduction of mercury, so as to affect the gums, with the occasional use of the warm bath.

Sometimes also a morbid condition of the system occurs during a mercurial course, and which tends to a fatal issue. Mr. Pearson has termed it ereth-

ismus. It is characterised by great depression of strength, a sense of anxiety about the præcordia, frequent sighing, trembling, partial or universal, a small quick pulse, sometimes vomiting, a pale contracted countenance, a sense of coldness; but the tongue is seldom furred, nor are the vital or natural functions much disordered.

In this state a sudden or violent exertion of muscular power will sometimes prove fatal. To prevent dangerous consequences, the mercury must be discontinued, whatever may be the stage, extent, or violence of the disease for which it has been exhibited, and the patient must expose himself freely to a dry and cool air, in such a manner as shall be attended with the least fatigue; and in the course of ten or fourteen days, he will sometimes be so far recovered that he may safely resume the use of mercury.

According to the opinion and testimony of Mr. Molevitz, a surgeon at Stutgard; the calx of zinc and quicksilver united, is the best *antisypilitic* remedy; this new preparation is thus made: take two parts of pure mereury, and one part of Venice turpentine. These are to be rubbed together, not only until the globules of quicksilver have disappeared, but for an hour afterwards. Then two parts of the oxyde of zinc, obtained by precipitation from white vitriol by means of kali, are to be added, and the whole beaten up into a mass; which, if too soft, may be rendered of a proper consistence by means of powder of cinnamon. The mass is to be divided into pills of two grains

each. This preparation produces a soothing and tonic effect, which counteracts those bad symptoms that mercury often excites. One pill is to be taken morning and evening, but this dose may be increased according to circumstances. It seldom salivates or increases any secretion or excretion, but is said to be wonderfully efficacious in curing syphilis.

He recommends the topical application of the vapour of water impregnated with sulphurated hydrogen gas, in arthritic pains arising from the continued use of mercury, or what is called the mercurial gout. He directs the affected foot to be put upon a small bench placed in a bathing-tub, into which several pints of water are poured upon one or two ounces of liver of sulphur fresh prepared with lime. The patient having brought the affected part into a convenient position, several glasses of strong vinegar are added to the mixture, after which the bathing tub must be closely covered, that the gas, which is now disengaged, may only touch the affected parts. The mineral waters impregnated with sulphurated hydrogen gas, such as those of Harrogate, are often very successfully used in the form of a tepid bath in similar cases. Dr. Garnett recommends a solution of liver of sulphur to stop a salivation, and in his treatise on the mineral waters of Harrogate, he mentions its use in *colica pictonum* ;* indeed there is little

* Also called the dry belly-ache, spasmodic or nervous colic ; and the painter's or Devonshire colic: the latter name has been given from its being common in cyder.

doubt of its diminishing the injurious effects of mercury, lead, arsenic, and other metallic poisons.

WHITE ARSENIC ; Or, OXIDE OF ARSENIC.

The following is taken from Duncan's Edinburgh New Dispensatory :—

As this substance is one of the most virulent poisons, we shall give a full account of its properties. It is white, compact, brittle, and of a glassy appearance. Its taste is sweetish, but acrid and slow in manifesting itself. It sublimes entirely when exposed to 283° Fahrenheit. When the operation is performed in close vessels, the oxide of arsenic assumes a glassy appearance, which it soon loses on exposure to the air. In open vessels it sublimes in dense white fumes, smelling strongly of garlic. If a plate of copper be exposed to the fumes, it is whitened. Oxide of arsenic is soluble in 80 parts of water at 60°, and in 15 at 212°. This solution has an acrid taste, and reddens vegetable blues. It is also soluble in 80 parts of boiling alcohol. From either solution it may be obtained regularly crystallized in tetrahedrons. From its solutions a glass-green precipitate is separated by a solution of sulphate of iron, a white precipitate by lime-water, and a yellow precipitate by any of the combinations of an alkali with sulphur, or with sulphur and hydrogen. All these precipitates, when exposed to a sufficient temperature, sublime entirely, and emit the smell of garlic.

counties. The palsy which remains after the removal of the colic is best relieved by the use of Bath waters ; or the spine may be rubbed with Barbadoes tar, dissolved in rum.—See *Dr. Huxham on the Colic of Devonshire* ; or *Dr. Warren's Account of the Colica Pictorum*, in Vol. II. of *The London Medical Transactions*.

But by far the surest test of the presence of arsenic is its reduction by carbonaceous substances.

With this view, a small quantity of any suspected substance may be mixed with some fatty or oily matter, and introduced within a tube closed at the bottom, and exposed to a red heat; if arsenic be present in any state, it will be sublimed in the form of brilliant metallic scales.

Oxide of arsenic is used by the dyers; as a flux in glass-making; in docimastic works; and in some glazes. Its sulphurets are much used by painters, but these advantages are not able to compensate for its bad effects. In mines, it causes the destruction of numbers who explore them; being very volatile, it forms a dust, which affects and destroys the lungs, and the unhappy miners, after a languishing life of a few years, all perish sooner or later. The property which it possesses of being soluble in water, increases and facilitates its destructive power; and it ought to be proscribed in commerce, by the strict law which prohibits the sale of poisons to unknown persons. Oxide of arsenic is every day the instrument by which victims are sacrificed, either by the hand of wickedness or imprudence. It is often mistaken for sugar; and these mistakes are attended with the most dreadful consequences. The symptoms which characterize this poison are a great constriction of the throat, the teeth set on edge, and the mouth strongly heated, an involuntary spitting, with extreme pains in the stomach, vomiting of glairous and bloody matter, with cold sweats and convulsions.

On dissection, the stomach and bowels are found to be inflamed, gangrenous, and corroded, and the blood is fluid. Soon after death, livid spots appear on the surface of the body, the nails become blue, and often fall off along with the hair, the epidermis separates, and the whole body becomes very speedily putrid. When the quantity is so very small as not to prove fatal, tremors, palsies, and lingering hectic succeed.

Mucilaginous drinks have been long ago given to persons poisoned by arsenic. Milk, fat, oils, and butter, have been successively employed. M. Navier has pro-

posed a more direct counterpoison. He prescribes one drachm of sulphuret of potass* (liver of sulphur) to be dissolved in a pint of water, which the patient is directed to drink at several draughts: the sulphur unites to the arsenic, and destroys its causticity and effects. When the first symptoms are dissipated, he advises the use of sulphureous mineral waters. He likewise approves the use of milk, but condemns oils. Vinegar, which dissolves arsenic, has been recommended by M. Sage, but upon what grounds we know not.

According to Hahneman, a solution of soap is the best remedy. One pound of soap may be dissolved in four pounds of water, and a cupful of this solution may be drunk lukewarm every three or four minutes.

Notwithstanding, however, the very violent effects of oxide of arsenic, it has been employed in the cure of diseases, both as applied externally and as taken internally. Externally it has been chiefly employed in cases of cancer; and as used in this way, it is supposed that its good effects depend on its acting as a peculiar corrosive: and it is imagined, that oxide of arsenic is the basis of a remedy long celebrated in cancer, which, however, is still kept a secret by a family of the name of Plunket, in Ireland. According to the best conjectures, their application consists of the powder of some vegetables, particularly the *ranunculus flammula* and *cotula fœtida*,† with a considerable portion of oxide of arsenic and sublimed sulphur intimately mixed together. This powder, made into a paste with the white of an egg, is

* According to Fourcroy, iron in a state of powder, is capable of destroying the causticity of metallic salts, whether they are of arsenic, mercury, or copper; and this depends on the iron robbing them of the oxygen which renders them caustic. It is therefore recommended to mix iron with the above solution of liver of sulphur.

† *Ranunculus Flammula*; i. e. spearwort, or smaller water crow-foot.---It is employed in some parts of France, instead of cantharides; it vesicates sooner, and is less painful than flies; but it is not so certain in its action, and often leaves ill-conditioned ulcers on the skin.

Cotula Fœtida; i. e. May-weed or stinking camomile.

applied to the cancerous part which it is intended to corrode ; and being covered with a piece of thin bladder, smeared also with the white of an egg, it is suffered to lie on from twenty-four to forty-eight hours ; and afterwards the eschar is to be treated with softening digestive, as in other cases. This application, whether it be precisely the same with Plunket's remedy or not, and likewise arsenic in mere simple forms, have in some instances been productive of good effects.

Justamond (formerly one of the Surgeons of the Westminster Hospital) used an ointment composed of four grains of white oxide of arsenic, ten grains of opium, and a drachm of cerate, and spread very thin upon linen. But its action is tedious. He also fumigated cancerous sores with a sulphuret of arsenic, with a view to destroy their intolerable fetor, with great success. Le Febure washed cancerous sores frequently, in the course of the day, with a solution of four grains of oxide of arsenic in two pounds of water. Arneman recommends an ointment of one drachm of arsenic, the same quantity of sulphur, an ounce of distilled vinegar, and an ounce of ointment of white oxide of lead, in cancerous and obstinate ill-conditioned sores, and in suppurated serophulous glands. The oxide of arsenic has even been applied in substance, sprinkled upon the ulcer. But this mode of using it is excessively painful, and extremely dangerous. There have been even fatal effects produced from its absorption.

The principal thing to be attended to in arsenical applications, is to diminish their activity to a certain degree. They then cause little irritation or pain, but rather excite a gentle degree of inflammation, which causes the diseased parts to slough off ; and it has the peculiar advantage of not extending its operation laterally.

No other escharotic possesses equal powers in cancerous affections ; but unfortunately its good effects often do not go beyond a certain length, and if in some cases it effects a cure, in others it must be allowed it does harm. While it has occasioned very considerable pain,

it has given the parts no disposition to heal, the progress of the ulceration becoming even more rapid than before.

White oxide of arsenic has also been recommended as a remedy for cancer when taken internally. With this intention, four grains of oxide of arsenic, of a clear white shining appearance, and in small crystals, is directed to be dissolved in a pint of distilled water; and of this solution the patient is to take a table-spoonful, with an equal quantity of milk, and a little syrup of white poppies, every morning fasting; taking care to taste nothing for an hour after it. After this has been continued for about eight days, the quantity is to be increased, and the doses more frequently repeated, till the solution be taken, by an adult, to the extent of six table-spoonsful in the course of a day. Mr. Le Febure, who is, we believe, the introducer of this practice, affirms that he has used it in more than two hundred instances without any bad effect, and with evident proofs of its efficacy. But when employed by others, it has by no means been found equally efficacious.

Of all the diseases in which white oxide of arsenic has been used internally, there is no one in which it has been so frequently and so successfully employed as in the cure of intermittent fevers. Prepared in different ways, it has long been used in Lincolnshire, and some other of the fenny countries, under the name of the *arsenic drop*. And it is conjectured, that an article, which has had a very extensive sale, under the title of the *tasteless ague-drop*, the form of preparing which, however, is still kept a secret, is nothing else but a solution of oxide of arsenic. But whether this be the case or not, we have now the most satisfactory information concerning this article, in the Medical Reports of the effects of arsenic in the cure of agues, remitting fevers, and periodic head-achs, by Dr. Fowler, of Stafford. The medicine he employed was the arsenite of potass. He directs, that sixty-four grains of oxide of arsenic, reduced to a very fine powder, and mixed with as much carbonate of potass, should be added to half a pound of distilled water, in a Florence flask, that it should then be placed in a sand heat, and

gently boiled till the oxide of arsenic be completely dissolved; that after the solution is cold, half an ounce of compound spirit of lavender be added to it, and as much distilled water as to make the whole solution amount to a pound. This solution is taken in doses, regulated according to the age, strength, and other circumstances of the patient, from two to twelve drops, once, twice, or oftener in the course of the day. And in the diseases mentioned above, particularly in intermittents, it has been found to be a safe and very efficacious remedy, both by Dr. Fowler and by other practitioners: but in some instances, even when given in very small doses, we have found it excite violent vomiting, and besides this, it has also been alledged by some, that those cured of intermittents by arsenic, are very liable to become phthisical.

If arsenic shall ever be extensively employed internally, it will probably be most certain and most safe in its operation, when brought to the state of a salt readily soluble in water. Mr. Macquer tells us, that it may be brought to the state of a true neutral salt, in the following manner: mix well together equal quantities of nitrate of potass, and of pure oxide of arsenic; put them into a retort, and distil at first with a gentle heat, but afterwards with so strong a heat as to redden the bottom of the retort. In this process the nitric acid is partly decomposed, and passes over into the receiver in the state of nitrous acid. The oxide of arsenic is at the same time acidified, and combines with the potass. The product, which is arseniate of potass, is found in the bottom of the retort, which may be obtained in the form of crystals of a prismatic figure, by dissolving it in distilled water, filtering the solution through paper, evaporating and crystallizing.

Oxide of arsenic, in substance, to the extent of an eighth of a grain for a dose, combined with a little of the flowers of sulphur, has been said to be employed internally in some very obstinate cases of cutaneous diseases, and with the best effect. But of this we have no experience.

The red and yellow arsenics, both native and factitious, have little taste, and are much less virulent in their effects than the foregoing. Sulphur, which restrains the power of mercury and antimony, remarkably abates the virulence of this poisonous mineral also. Such of these substances as participate more largely of sulphur, seem to be almost innocent: the factitious red arsenic, and the native orpiments, have been given to dogs in considerable quantity, without their being productive of any apparent bad consequences. They have been used as medicines in the eastern countries, and by some imprudently recommended in our own.

VINEGAR;—OR, IMPURE ACETOUS ACID.

THE least impure is that which is obtained from white wine; it possesses strong antiseptic powers on dead animal and vegetable matters; hence it is employed in pickling. Its action on the living body is gently stimulant and astringent. It promotes transpiration and the discharge by urine; and used moderately as a condiment, it facilitates digestion. Vinegar is sometimes adulterated with sulphuric (vitriolic) acid. With the same intention of making the vinegar appear stronger, different acid vegetables are occasionally infused in it.

From the mucilaginous impurities which all vinegars contain, they are apt, on exposure to the

air, to become turbid and ropy, and at last vapid. This inconvenience is best obviated by keeping it in bottles completely filled and well corked. It keeps better if it be boiled a few minutes before it is corked. As a medicine it is used in putrid diseases, in scurvy, and to counteract the effects of narcotic poisons and mephitic vapours. In the form of clyster (see Appendix) it is used in the same diseases, and in obstinate constipation. Externally, it is applied in fomentations and baths, as a stimulant and diseutient; and its vapour is inhaled in putrid sore throat, and diffused through the chambers of the sick, to correct the putrescency of the atmosphere. The acid of vinegar is employed in many chemical and pharmaceutical preparations, for which, not common vinegar, but the acid spirituous part that is obtained by distillation, called *distilled* vinegar*, is chiefly employed.

The quantity of fixed alkaline salt which vinegar is capable of saturating is one of the surest criterions of its strength.

* Pure distilled vinegar is colourless and transparent, has a pungent smell, and purely acid taste, totally free from aerinony and empyreuma, and should be entirely volatile: it also should keep its colour when super-saturated with ammonia.—See *Spirit of Myndererus*, page 73.

Distilled vinegar in its effects on the animal economy does not differ from common vinegar; it is less pleasant to the taste. Vinegar is not distilled with an intention to concentrate it, but only to disengage it from its mucilaginous or extractive parts. Vinegar should be distilled only in glass or earthen alembics.

The London College have in their last Pharmacopœia admitted a concrete preparation of vinegar, under the name of *acetous acid*, called in the Edinburgh Dispensatory, *acetic acid*; it is directed to be made by a simple distillation of verdegris coarsely powdered and first well dried in a water-bath. The liquor is purified by re-distilling. It is almost solely used as an analeptic remedy in syncope, asphyxia, hysteric affections, and head-achs. Applied to the skin, it acts as a stimulant and rubefacient, but it is most frequently snuffed up the nostrils in the state of vapour. Vinegar distilled from verdegris turns blue on being saturated with water of ammonia, a manifest proof that it contains copper, a portion of which it retains even after a re-distillation with a gentle heat.

The following *new method* of preparing this acid is taken from *The French Annals des Artes et Manufactures*: take any quantity of white vinegar, concentrated by the frost, (see note to pages 168, &c.) and pour to it half as much concentrated sulphuric acid; (strong vitriolic acid, commonly called oil of vitriol;) then distil by mixture in a sand bath till the vapours of the sulphuric acid begin to appear, when a light and strong scented liquid is obtained, which, however, requires to undergo a second distillation. The acetic acid obtained by this new method may be used without the apprehensions excited by that commonly sold in the shops.

Camphorated Acetous, or *Acetic Acid*; (Edinburgh Dispensatory;) is made by adding to six ounces of the stronger acetous acid, four drachms of camphor previously brought to a state of powder by triturating it with a little alcohol. This solution is a very powerful analeptic remedy. Its vapour snuffed up the nostrils, which is the only method of using it, is one of the most pungent stimuli we possess. It is so extremely volatile that it cannot be preserved without excluding it from the contact of the air; and it is so powerful a menstruum, that it corrodes cork, and almost all metals except gold. It should therefore be kept in glass phials, with ground glass stoppers, or in small gold boxes, such as are used for Henry's aromatic spirit of vinegar, for which it is in fact a more simple substitute.

Infusions of vegetable substances in acetous acid, called medicated vinegars, are sometimes employed; but as acetous acid, in itself sufficiently perishable, has its tendency to decomposition commonly increased, by the solution of any vegetable matter in it, it should never be used as a menstruum, unless where it promotes the solution of the solvend, as in extracting the acrid principles of squills, meadow saffron, garlic, &c. It also dissolves the vegetable inspissated juices, and several of the gummy resins, as ammoniacum; and in many cases, where this acid itself is principally depended on, it may be advantageously impregnated with the flavour of certain vegetables: most of the odoriferous flowers impart to it their

fragrance. The aromatic vinegar, (*vinaigre des quatre voleurs*,) or vinegar of the four thieves; which was supposed to be a certain prophylactic against the contagion of plague, and similar diseases, is thus prepared: take of tops of rosemary dried, leaves of sage dried, each four ounces; flowers of lavender dried, two ounces; cloves, two drachms; distilled vinegar, eight pounds; macerate for four days, express the liquor, and strain it. This preparation is in fact a pleasant solution of essential oils in vinegar, which will have more effect in correcting bad smells than in preventing fever.

Vinegar of Roses, (Quincy's Dispensatory.) This preparation is made by digesting for four or five weeks, exposed to the sun, in a close vessel, a pound of dried red rose-buds, in a gallon of distilled vinegar. It is recommended for embrocating the head and temples in some kinds of head-ach, and is said to be frequently serviceable.

An infusion of rue, scordium, (water-germander,) angelica roots, juniper berries, and Seville orange peel, is also recommended by Quincy, against surfeits, and upon any threatenings of fever, instead of *treacle water*; a preparation formerly highly esteemed as a sudorific and alexipharmæ, and composed of Venice treacle, mithridate, French brandy, vinegar, or lemon juice. The spirituous alexeterial water with vinegar, and the surfeit and plague waters of the former London

and Edinburgh Pharmacopœias; are also somewhat similar articles.

Camphor Julep with Vinegar, (Lewis's Dispensatory;) take of camphor, one drachm; gum arabic, two draehms; refined sugar, half an ounce; distilled vinegar, a pint; grind the camphor with a few drops of alcohol to reduce it to a powder, then add the gum, previously made into a mucilage with an equal quantity of water, and rub them together till they are perfectly mixed: to which add by degrees, the vinegar with the sugar previously dissolved in it. The dose is from one to three table spoonsful, in barley-water, &c. It is highly serviceable in some fevers where camphor by itself would be less proper; the vinegar not only rendering it more grateful to the palate and stomach, but likewise promoting and extending the efficacy of the camphor.

Vinegar of Squills, (London Pharmacopœia.)—Take of squills, recently dried and sliced transversely, four ounces; distilled vinegar, a pint and a half; proof-spirit, two ounces; macerate the squills in the vinegar for four days, in a glass vessel, frequently shaking it, after which express the liquor, and when the feces have subsided, decant it off and add the spirit. Vinegar of squills is a medicine of great antiquity; it is a very powerful stimulant; and hence is frequently used with considerable success, as a diuretic and expectorant. The dose is from half a drachm to

three drachms; where crudities abound in the first passages it may be given in a larger dose to evacuate them by vomiting. It is most conveniently exhibited along with cinnamon, or other agreeable aromatic waters, which prevent the nausea it would otherwise, even in small doses, be apt to occasion.

An *oxymel* is made by boiling in a glass or an unglazed earthen vessel, to the thickness of a syrup, a pound and a half of clarified honey with a pint of vinegar of squills: a *syrup* is also prepared by dissolving with a gentle heat, a pound and three quarters of double-refined sugar, in a pint of the squill vinegar. The dose of these preparations is from one to three tea-spoonsful for promoting expectoration, which either of them will do very powerfully; they frequently are used alone, or joined with the emulsion of gum ammoniacum, or mixed up with conserve of hips, mucilage, and other articles, in a linctus; see page 124.

Vinegar of Meadow Saffron. Take of the fresh and succulent roots of colchicum, or meadow saffron, cut into small pieces, one ounce; distilled vinegar, a pint; of proof-spirit, an ounce and a half; digest for four days in a glass vessel, and otherwise prepare it according to the rules given for vinegar of squills.

This medicine is exhibited only in the forms of oxymel or syrup, which are prepared in the same manner as those of squills. The dose of the syrup

or oxymel of meadow saffron, is a table-spoonful once a day at first, and gradually more, or oftener repeated. Either of these preparations is said to possess considerable activity as a diuretic, in dropsy and other serous disorders. The syrup, both from squills and meadow saffron, is by many thought more agreeable than the oxymel, and is equally as efficacious.

Syrup of Acetous Acid, (Edinburgh Dispensatory.) Take of distilled vinegar, two pints and a half; double-refined sugar, three pounds and a half; boil them so as to form a syrup. This is to be considered as a simple syrup acidulated; and is very agreeable. It is often employed in mucilaginous mixtures, and the like: and, on account of its cheapness, is frequently preferred to syrup of lemons.

Cayenne, Elder, Garlic, Tarragon, French, and other vinegars, employed as seasoning with food; together with every medicinal preparation from vinegar, may be had in the highest perfection, at the Author's Laboratory.

Vinegar is a powerful resolvent and relaxant; used externally in fomentations, &c. against inflammations, bruises, sprains, fresh scalds, stings from wasps and other insects; it is also employed in clysters, gargles, &c.—See Appendix.

Taken internally, the dose of vinegar, according to the different circumstances requiring it, and

the constitution of the patient, may be from two drachms to two ounces.

Oxycrate, or vinegar mixed with such a portion of water as is required, and rendered still milder by the addition of a little honey, is serviceable as a diluent to allay thirst in fevers, &c.

A very important medicinal virtue, mentioned by Macquer, Dr. Rotheram, and others, has been ascribed to vinegar, namely, that of curing canine madness. Mr. Buchoz, in a work entitled an *'Historical Treatise of Plants growing in Lorraine and the three Bishopricks,'* affirms, that several successful trials have ascertained the efficacy of vinegar against the ill effects arising from the bite of mad dogs, when given in the quantity of a pound each day, divided into three doses; one to be taken in the morning, another at noon, and the third in the evening.

The discovery of this quality of vinegar was made at Udina, in Trioul, a province belonging to Venice, by an inhabitant of that town, who having been seized with canine madness, was cured by drinking vinegar* by mistake, instead of some medicine that had been prepared for him.

* Dr. Thornton advised the application of hot vinegar, sharpened with vitriolic acid, to the wounds of five men who had been bitten by a rabid animal. But the surest treatment is, where practicable, to cut out, *as speedily as possible*, the part bitten; though Townsend and others say, if the operation be performed after three days, or perhaps a week, the danger is escaped. But where, on

Vinegar, according to Dr. Cullen, is less liable to undergo changes in the first passages than the

account of the situation of the parts, or from other causes, incision is impracticable, deep scarifications around the part, and the application of the cupping-glass, or leeches, cutting away the lacerated parts, applying the cautery, and promoting a copious suppuration for a long time in the part bitten is advised; because it sometimes happens, that the saliva is lodged in the cellular membrane, where it remains, as it were, fixed and inert, till, brought into action by some cause, it enters into the circulation, affects the nerves, and produces the train of symptoms of this most terrible of diseases.

A strong ligature should immediately be applied to the limb, above the part bitten, to intercept the passage of the virus into the system.

Of the great variety of internal remedies which have had their day of reputation, for preventing the ill effects arising from the bite of a mad dog, a more adequate experience has, with all of them, down to the *Ormskirk Medicine*,* discovered the deception. Indeed some eminent Physicians assert that it is totally incurable, when once the disease has affected the nervous system: nor can any reliance be placed on dipping in the salt water as a means of prevention.

With regard to the symptoms of madness in dogs, they are very equivocal; and those particularly enumerated by some authors, are only such as might be expected in dogs much heated or agitated by being violently pursued and struck. One symptom indeed, if it could be depended upon, would determine the matter, namely, that all other dogs avoid and run away from that which

* This medicine has been analyzed by Dr. Heysham, and found to be composed of chalk, Armenian bole, alum, and oil of aniseed. It is evident therefore, that the reputation of this insignificant medicine, rested solely on its being exhibited in many cases where no contagion was communicated to the person bitten, and where of course no disease could take place.---See the *Edinburgh Practice of Physic*, &c.

native vegetable acids, which have yet to go through the process of fermentation. Dr. Alston also observes, that it is preferable to lemon juice or any mineral acid. Vinegar mixes easily with blood and its serum, and with most of the fluids of animals; not thickening or coagulating them, like the acids of the mineral kingdom; but tending rather to attenuate or resolve coagulations. It is likewise, when taken internally, less stimulating than the mineral acids, and less disposed to affect the kidneys. It is a medicine of great use in the different kinds of inflammatory and putrid diseases, both internal and external: it is one of the most certain antiphlogistics and sudorifics in ardent bilious fevers and other malignant distempers; and one of the best preservatives against pestilential and other putridinuous contagions. Weakness, faintings, vomitings, hiccup, hysterical and hypo-

is mad. Upon this supposition they point out a method of discovering whether a dog who hath been killed, was really mad or not; namely, by rubbing a piece of meat along the inside of his mouth, and then offering it to a sound dog. If the latter eats it, it is a sign the dog was not mad; but if the other rejects it with a kind of howling noise, it is certain that he was. Dr. James tells us, that among dogs, the disease is infectious by staying in the same place; and that after a place has been once infected, the dogs put into it will be for a considerable time afterwards in danger of being mad also.

A remedy for this, he says, is, to keep geese for some time in the kennel. He rejects as false, the opinion that dogs, when going mad, will not bark; though he owns that there is a very considerable change in their bark, which becomes hoarse and hollow.

chondriacal complaints are also frequently relieved by vinegar, applied to the mouth and nose, or received into the stomach : lethargic persons are often found to be excited more effectually by vinegar blown into the nose, than by more pungent volatile salts or spirits.

Vinegar counteracts, in a peculiar manner, the effects of mephitic vapour, spirituous liquors, opium, hemlock, henbane, deadly-night shade, and other narcotics ; to the ill effects of which it is an antidote. It cures surfeits from animal food ; inveterate scurvies, (especially when joined with scurvy-grass, horse-raddish, and other plants of the acrid kind,) and sundry chronic diseases, yield to its use ; and in many other instances its efficacy is truly wonderful.

The daily use of vinegar with food is salutary in hot bilious dispositions, and where there is a tendency to inflammation or putrefaction ; but an imprudent use of it is not without considerable inconvenience : large and frequent doses of vinegar too much coagulate the chyle, and produce not only a leanness, but an atrophy ; when taken to excess to reduce a corpulent* habit, tubercles of

* Hoffman suspects that it produces this effect by impeding the formation of chyle, or destroying the union of the unctuous and the serous fluids of which chyle is composed ; an effect common to all acids, as appears from their coagulating milk and artificial emulsions.

Aikin says, he has known great corpulence reduced by the liberal use of vinegar, which is the acid commonly used for this purpose, but not with impunity ; diseases

the lungs and a consumption has been the consequence. It is prejudicial to children, to aged, hys-

succeeding which eluded the power of medicine, and proved at length fatal.

Rientard advises to take vinegar of squills in small doses, with frequent purging and brisk exercise. *Semen fraxini*, or bird's tongue, as it is called; one drachm, drunk in a morning in a glass of wine, is very much commended as an effectual diuretic, and on that account abates corpulency. Borellus recommends the chewing of tobacco; but it is not safe for all persons to use it, least it should throw them into a consumption.

Dr. Fleming recommends from one to four grains of Castile soap to be taken at bed-time. But perhaps the soap-leys would be more powerful, and it might be more easily taken, sheathed in veal broth, as directed by Dr. Chittick, when recommended as a dissolvent of the stone.

But it will seldom happen that patients will be found sufficiently steady to persist in any of these courses, it being the nature of the disorder to render them irresolute and inattentive to their condition. Therefore the principal use of rules must be with a view to prevention; and persons disposed to corpulency should take care in time to prevent it from becoming an absolute disease, by using a great deal of exercise, not indulging in sleep, and abridging their meals, especially that of supper. Salted meats are less fattening than such as are fresh; and drinking freely of coffee is recommended to corpulent people.

But Dr. Fothergill observes, that a strict adherence to vegetable diet reduces exuberant fat: more certainly than any other means that he knows; and gives two cases wherein this regimen succeeded remarkably well. The famous Dr. Cheyne brought himself down in this way, from a most unweildy bulk to a reasonable degree of weight, as he himself informs us. It deserves, however, to be remarked, that every practice for the removal

terical, and hypochondriacal persons, in cold, pale, phlegmatic habits, where the vessels are lax, the circulation languid, and the power of digestion weak.

Vinegar adulterated with the vitriolic acid may be detected, if a saturated solution of chalk, made with a strong vinegar, be added to such as is suspected : no change will ensue if it be pure ; but if it contain the smallest quantity of the mineral acid, the mixture will immediately become milky, and on standing a short time, deposit a white sediment. Distilled vinegar, through using improper stills, sometimes contains a portion of lead, which is discovered by taking a small quantity thereof, and adding to it a little of the water of prepared kali, formerly called *lixivium* or oil of tartar ; if on the mixture being made a cloudiness appears, or a white powder falls, there is lead dissolved in it.

Vinegar dissolves zinc, iron, copper, tin, lead, bismuth, and regulus of antimony ; the two last in very small quantity, but sufficient to give a strong impregnation to the vinegar. It dissolves lead more easily, when made into a calx, than in its metallic state : boiled or standing in the common glazed earthen vessels, (in the glazing of which this metal is a principal ingredient) it extracts so much as to become strongly tainted with the pernicious qualities of the lead.

or prevention of fatness must be used with great caution and prudence ; for not a few, anxious to prevent this affection, have had recourse to a regimen and to a medicine, which have proved fatal.

Vinegar very much concentrated, as the acetic acid, being distilled with equal parts of alcohol, furnishes a liquor which has all the essential characters of ether, or rather is a true ether, similar in its general properties to the ether prepared with the mineral acids. Combinations of vinegar with fixt alkaline salts, are useful aperients, diuretics, and cathartics. Dr. Aikin says, he has known two drachms of the alkali, dissolved in as much vinegar as was sufficient to saturate it, occasion ten or twelve copious watery stools, and a plentiful discharge of urine, without griping or fatiguing the patient. A mixture of alkali and distilled vinegar, evaporated to perfect whiteness, by gentle fusion and solution in water, is a medicine of great efficacy, few of the saline deobstruents equal it in virtue: it was formerly called *Diuretic Salt*; but now *Acetite of Potass*, by the Edinburgh, *Acetated Kali* by the London, and *Acetated Vegetable Kali*, by the Dublin College; it is generally given in doses of ten or twenty grains as a mild aperient; and to a drachm or two as a purgative and diuretic.

The Deobstruent Drops, mentioned in the former editions of the Medical Compendium, are composed of three parts water of acetated kali, i. e. lixivium of diuretic salt, two parts spirit of nitrous ether, i. e. sweet spirit of nitre, and one part antimonial wine. They are, as their name expresses, proper for obstructions of the viscera, &c.; such as jaundice, dropsy, gravel, and liver complaints; cutaneous eruptions, and many other

chronical affections. They are usefully taken with the extracts and essences of British Plants: See Appendix.

The Dose is from forty drops to an hundred.

For the combination, &c. of volatile alkali with vinegar, see page 73.

MINERAL ACIDS;—ETHER, &c.

Vitriolic Acid, of the London and Dublin Pharmacopœias; and *Sulphuric Acid* of the Edinburgh Dispensatory: formerly known by the names of *Oil* and *Strong Spirit of Vitriol*.

Vitriolic acid, when sufficiently diluted, is an excellent tonic, checking fermentation, exciting appetite, promoting digestion, and quenching thirst; it is therefore employed with success in morbid acidity, weakness, and relaxation of the stomach. As an astringent it is used in hæmorrhagies; and from its refrigerant and antiseptic properties, it is a valuable medicine in many febrile diseases, especially those called putrid. If taken in any considerable quantity, or for some time, it seems to pass off undecomposed by the kidneys or skin; and it is, perhaps by its stimulating action on the latter, that it is advantageously employed internally, in psora* and other cutane-

* It is said to succeed equally in the dry and moist itch; and when given to nurses, to cure both themselves and their children. It is also directed to be applied externally as a lotion, for the same purpose, mixed in the

ous affections. The best mode of using it, is to mix it with as much distilled water as will render it palatable, to which some syrup or mucilage must be added. To prevent its injuring the teeth, it may be conveniently sucked through a quill, and the mouth should be carefully washed after each dose.

Diluted, or Weak Sulphuric, or Vitriolic Acid, is made by mixing one part of the concentrated or strong acid of vitriol, with seven parts water—Edinburgh and Dublin Colleges: but the London College orders eight parts of distilled water to be added.

The dilution, by means of distilled water, is preferable to spring water, which, even in its purest state, is not free from impregnations affecting the acid.

The combinations of this acid with aromatics, alcohol, &c. are as follow:—

Elixir of Vitriol, now called *Aromatic Sulphuric* (or *Vitriolic*) *Acid*.—Take of alcohol, one pound; concentrated vitriolic acid, three ounces, by weight; drop gradually the alcohol upon the acid; digest the mixture with a very gentle heat,

proportion of from two to four drachms (*by weight*) of the vitriolic acid, to a pint of distilled water: or it may be applied in the form of ointment, by blending one part acid with eight parts of the simple ointment, or hog's lard. This ointment is also useful in several chronic eruptions, and is likewise recommended as a rubefacient in local palsy and rheumatism.

in a close vessel for three days, and then add of cinnamon, bruised small, an ounce and a half; ginger, one ounce; digest again in a closed vessel for six days; afterwards filter the tincture through paper placed in a glass funnel.

This is a valuable medicine in weakness and relaxations of the stomach, and decays of constitution, particularly in those which proceed from irregularities, which are accompanied with slow febrile symptoms, or which follow the suppression of intermittents. It frequently succeeds, after biters and aromatics by themselves have availed nothing; and, indeed, great part of its virtue depends on the vitriolic acid; which, simply diluted with water, has, in those cases where the stomach could bear the acidity, produced happy effects.

It is very usefully conjoined with the Peruvian and other tonic barks; both as covering their disagreeable taste, and as coinciding with them in virtue. This tincture and the diluted vitriolic acid, are each given in doses of from ten to thirty drops, or more, several times a day.

Dulcified, or Sweet Spirit of Vitriol; now called *Sulphuric Ether with Alcohol* by the Edinburgh, *Spirit of Vitriolic Ether* by the London, and *Vitriolic Ethereal Liquor* by the Dublin College. It is directed to be made by mixing one part ether with two of alcohol. This preparation is not essentially different from the celebrated liquor of Hoffman; to which it is, by the author himself, not unfrequently directed as a succedaneum: but ac-

cording to Chaptal, *Hoffman's Anodyne Liquor*, now called *Compound Spirit of Vitriolic Ether*, or *Oily Ethereal Liquor*, should be made by mixing two ounces of alcohol, two ounces of ether, and twelve drops of ethereal oil; formerly called oil of wine. Both these preparations possess similar virtues with ether, but in an inferior degree; sweet spirit of vitriol has been for some time greatly esteemed, both as a menstruum and a medicine. It dissolves some resinous and bituminous substances more readily than alcohol alone, and extracts elegant tinctures from sundry vegetables. As a medicine, it promotes perspiration and the urinary secretion; expels flatulencies, and in many cases spasmodic strictures, eases pain, and procures sleep.

The dose is from half a drachm to two drachms, or more; in any convenient vehicle.

Sulphuric Ether of the Edinburgh, and *Vitriolic Ether* of the London and Dublin Colleges. Ether is the highest, most subtile, volatile, and inflammable of all known liquids; it quickly exhales in the air, diffusing an odour of great fragrance: it does not mingle with water, with alkaline liquors, with acid liquors, or with vinous spirits; at least not in any considerable quantity, only a small portion of the ether being imbibed by them: it unites with oils in all proportions, dissolves balsams and resins, and extracts the oily and resinous parts of vegetables. It is esteemed, in flatulent and spasmodic complaints, the gout in the stomach, nervous

asthmas, and the like. Though it will not mix with water, it may be diffused in a sufficient quantity of it so as to be taken without much difficulty. It is, by Malouin, thought one of the most perfect tonics, friendly to the nerves, cordial and anodyne; and is recommended as a good remedy in rheums, for abating coughs, especially those of the convulsive kind. Its great volatility renders the taking of it very incommodious: the author above-mentioned, orders it, as the most convenient form, to be dropt on sugar or powdered liquoricē, a little warm water or some warm infusion to be immediately added, and the whole swallowed directly. The usual dose of ether is from ten to sixty drops. Chaptal, (who observes that it is an excellent antispasmodic, and mitigates pains of the colic as if by enchantment, as it also does external pains,) says, that he knew a person who accustomed himself so much to ether, that he took *two pints per day!* a rare example of the power of habit on the constitution.

Duncan observes, that ether, as a medicine, taken internally, is an excellent antispasmodic, cordial, and stimulant. In catarrhal and asthmatic complaints, its vapour is inhaled with advantage, by holding in the mouth a piece of sugar, on which ether has been dropped. It is given as a cordial in nausea, and in febrile diseases of the typhoid type; as an antispasmodic in the croup, whooping-cough, obstinate hiccups, hysteria, and other spasmodic and painful diseases; and as a stimulus in soporose and apoplectic affections. Regular

practitioners seldom give so much as half an ounce, much more frequently only a few drops for a dose; but empirics have sometimes ventured upon much larger quantities, and with incredible benefit. When used externally, it is capable of producing two very opposite effects, according to the management; for, if it be prevented from evaporating, by covering the place, to which it is applied, closely with the hand, it proves a powerful stimulant and rubefacient, and excites a sensation of burning heat. In this way it is frequently used for removing pains in the head or teeth. On the contrary, if it be dropped on any part of the body, exposed freely to the contact of the air, its rapid evaporation produces an intense degree of cold;* and as this is attended with a proportionable diminution of bulk in the part applied, in this way it has frequently facilitated the reduction of strangulated

* Mr. Cavallo has described, in the Philosophical Transactions for 1781, a pleasing experiment of freezing water by means of ether. The ether is put into a phial so as not completely to fill it; and in the neck of this phial is fitted, by grinding, a tube, whose exterior end is drawn out to a capillary fineness. Whenever the bottle thus stopped is inverted, the ether is urged out of the tube in a fine stream, in consequence of the pressure exerted by the elastic ethereal vapour, which occupies the superior space of the bottle. This stream is directed on the outside of a small glass tube containing water, which it speedily cools, down to the freezing point; at which instant the water becomes suddenly opaque, in consequence of the icy crystallization. If a bended wire be previously immersed in the water, it may afterwards be drawn out, and the ice along with it.

hernia. It is also recommended to be used in the same manner, for fresh burns or scalds; and stings from wasps or other insects.

The vitriolic is not the only acid, from the mixture of which, with alcohol, ether may be produced. The nitrous, marine, and acetous acids, have also been found capable of forming, with alcohol, liquors possessing all the essential properties of ether, but differing from ether, properly so called, or vitriolic ether, by properties peculiar to each.

Nitrous and Nitric Acids: the first formerly called *Glauber's Spirit of Nitre*, or *Smoaking Nitrous Acid*; the other, *Pale*, or *not Smoaking Nitrous Acid*; and is, when diluted, sold by the name of *Aqua Fortis*, or *Strong Water*.

These acids have been long employed as powerful pharmaceutic agents; lately, however, their use in medicine has been considerably extended.

In the state of vapour they have been used to destroy contagion* in jails, hospitals, ships, and

* Among the internal regulations of fever houses, first instituted in Chester, Manchester, Liverpool, Dublin, Cork, and other provincial towns; and since adopted in London, with the happiest effects, are the following:—Every patient when admitted into the house, is to change his infectious for clean linen; the face and hands are to be washed clean with warm water, and the lower extremities fomented. The effect which this salutary change has upon the patient before any medicine is given, is often more beneficial than those which all the febrifuge drugs in the world could bestow.

During the prevalence of a contagious epidemic, great

other places, where the accumulation of animal effluvia is not easily avoided. The fumigating

care should be taken to avoid all causes of debility, and to preserve an equal state of mind. The general alarm which prevails on such occasions, contribute not a little to extend the evil.

The noxious matter of pestilence, is, in many cases, readily distinguished by the peculiarly disagreeable smell which it communicates to the air. Morveau lately attempted to ascertain its nature; but he soon found the chemical tests hitherto discovered altogether insufficient for that purpose. He has put it beyond a doubt, however, that the noxious matter which arises from putrid bodies, is destroyed altogether by those gaseous bodies which readily part with their oxygen. Odorous bodies, such as benzoin, aromatic plants, &c. have no effect whatever; neither have the solutions of myrrh, benzoin, &c. in alcohol, though agitated in infected air. Gunpowder, when fired in infected air, displaces a portion of it; but what remains, still retains its fetid odour. Sulphuric acid has no effect; sulphurous acid weakens the odour, but does not destroy it. Vinegar diminishes the odour, but its action is slow and incomplete. Acetic acid acts instantly, and destroys the fetid odour of infected air completely. The fumes of nitric and muriatic acid are equally efficacious. But the most powerful agent is, *oxy-muriatic acid gas*, first proposed by Mr. Cruickshanks, and now employed with the greatest success in the British navy and military hospitals. These gases are readily procured. Nitre, or as it is called in the New Chemistry, *Nitrate of Potash*, mixed with sulphuric acid, yields a very powerful gas, the acid combining with the potash, the base of the nitre expels the nitrous acid gas in fumes. Muriatic acid gas is obtained in a similar manner by using common salt, the alkali combines with the acid, and the muriatic gas goes off in vapour. Prevention, however, being better than cure, the following most excellent rules for the management of

such places with the vapour of nitrous acid has often been attended with success; but, Duncan

persons sick with contagious diseases, should be strictly attended to:

Dr. Hygarth's Rules to prevent Infectious Fevers.—1. The air should be freely admitted by opening the door and window, and particularly previous to the arrival of a visitor.—2. The bed-curtains should only be drawn on the side next the light, so as to shade the face.—3. Dirty clothes, utensils, &c. should be frequently changed, immediately immersed in cold water, and washed clean when taken out of it.—4. All discharges from the patient should be instantly removed. The floor near the patient's bed should be rubbed clean every day with a wet mop or cloth.—5. The air in a sick room, has, at the same time, a more infectious quality in some parts of it than in others. Visitors and attendants should avoid the currents of the patient's breath, the air which ascends from his body, especially if the bed-curtains be closed, and the vapour arising from all evacuations. When medical or other duties require a visitor or nurse to be placed in these situations of danger, infection may be frequently prevented by a temporary suspension of respiration.—6. Visitors should not go into an infectious chamber with an empty stomach: and in doubtful circumstances, on coming out, they should blow from the nose, and expectorate all infectious poison which may have been drawn in by the breath, and may adhere to those passages.

The want of air and cleanliness appear to be the great causes both of the plague and of the malignant fever. There seems to be a considerable degree of affinity between these two diseases. In a late publication on the increase and decrease of different diseases, and particularly of the plague, Dr. Heberden, jun. has given a very curious detail of information on the subject. Many circumstances, and among others, that of the malignant fever preceding and following the plague, seem to prove

observes, we have heard that success ascribed entirely to the ventilation employed at the same time. Ventilation may certainly be carried so far, that the contagious miasmata may be diluted to such a degree that they shall not act on the body ; but to us it appears no less certain, that these miasmata cannot come in contact with nitric acid or oxy-muriatic acid vapour, without being entirely decomposed and completely destroyed. It is, besides, applicable in situations which do not admit

that the plague is merely an aggravated malignant fever. Dr. Haygarth observes, that the plague is a species of fever, and that it does not render the atmosphere infectious farther than *a few feet* from the patient, or the poison. —See *Dr. Haygarth's Letter 'on the Prevention of Infectious Fevers.'*

Wherever a person who has been exposed to contagion feels an attack of fever, it is advised immediately to have recourse to the cold, or shower bath, as numerous instances have occurred, where the febrile action has been instantly cut short by this means being used, particularly at the commencement. No reliance can be placed on tobacco, or camphor, to prevent catching the infection. The regimen of those visiting the infected is directed to be such as they are accustomed to, and in cases of fatigue, to take as cordials, spirits and port wine in moderate quantities. But a full and luxurious diet would be improper. A moderate quantity of animal food (not omitting vegetables) joined with a moderate portion of well fermented liquor, and a few glasses of red port to those who are accustomed to the use of wine, will in most cases be advisable. If the weather should be warm, the proportion of butcher's meat should be diminished, and that of vegetables increased. At such seasons, pickles and ripe (but somewhat acid) fruits, are highly salutary. Daily exercise and frequent ablutions should not be neglected.

of sufficient ventilation ; and where it is, the previous diffusion of acid vapours is an excellent check upon the indolence and inattention of servants and nurses, as by the smell we are enabled to judge whether they have been sufficiently attentive to the succeeding ventilation. Nitric acid vapour, also, is not deleterious to life, and may be diffused in the apartments of the sick, without occasioning to them any material inconvenience. The means of diffusing it are easy. According to Dr. Smyth's process, half an ounce of powdered nitre is put into a saucer, which is placed in a pipkin of heated sand. On the nitre two drachms of sulphuric acid are then poured. The fumes of nitric acid immediately begin to rise.—This quantity will fill with vapour a cube of ten feet; and by employing a sufficient number of pipkins, the fumes may be easily made to fill every part of a ward of any extent. After the fumigation, ventilation is to be carefully employed.

The internal use of these acids has also been lately much extended. In febrile diseases, water acidulated with them forms one of the best antiphlogistic and antiseptic drinks we are acquainted with. Hoffman and Everhard long ago employed it with very great success in malignant and petechial fevers; and in the low typhus, which frequently rages among the poor in the suburbs of Edinburgh, we have repeatedly given it, says Dr. Duncan, with unequivocal advantage, before the contemptible quackery of Reich was so undeservingly rewarded by the King of Prussia. In the

liver-complaint of the East Indies, and in syphilis, nitric acid has also been extolled as a valuable remedy by Dr. Scott, and the evident benefits resulting from its use in these complaints, has given rise to a theory, that mercury only acts by oxygenizing the system. It is certain, that both the primary and secondary symptoms of syphilis have been removed by the use of these acids, and that the former symptoms have not returned, or been followed by any secondary symptoms. But in many instances they have failed, and it is doubtful if ever they effected a permanent cure, after the secondary symptoms appeared. Upon the whole, the opinions of Mr. Pearson on this subject, lately agitated with so much keenness, appear to us so candid and judicious, that we shall insert them here. ‘ He does not think it eligible to rely on the nitrous acid in the treatment of any one form of the lues venerea ; at the same time, he by no means wishes to see it exploded as a medicine altogether useless in that disease. When an impaired state of the constitution renders the introduction of mercury into the system inconvenient, or evidently improper, the nitrous acid will be found, he thinks, capable of restraining the progress of the disease, while at the same time it will improve the health and strength of the patient. On some occasions, this acid may be given in conjunction with a mercurial course, and it will be found to support the tone of the stomach, to determine powerfully to the kidneys, and to counteract in no

inconsiderable degree the effects of mercury on the mouth and fauces.

Mr. Blair, in the second part of his *Essays on the Venereal Disease*, has the following observations on the nitrous and nitric acids :—

‘ To the dyspeptic and debilitated venereal patients (if they be not too hectic) in conjunction, or given alternately with mercury. It not only improves their general strength and appetite, but enables them to bear the proper quantity of mercury much better than when it is administered alone.

‘ In erysipelatous, phagedænic, languid, fistulous, and irritable ulcers, where no venereal infection exists, and where mercury would probably do harm, the diluted acids are sometimes astonishingly efficacious, employed externally as well as internally.

‘ Old chronic pains and tumours in the bones, ligaments, and membranous parts, have been alleviated by the internal use of the new remedies; especially when symptoms arose from the mal-administration of mercury.

‘ The nitric lotion is often serviceable in cases of excoriated glands or prepuce, &c. accompanied with a pruriform discharge, where the degree of swelling, pain, and inflammation is inconsiderable: but the common saturine lotion appears to be equally beneficial, and has the advantage of never increasing inflammatory symptoms.

‘ Gonorrhæa and fluor albus may now and then be removed by the acids, employed internally or

by injection; but they often will produce a troublesome dysuria, and are not so certain in arresting those discharges as the common means of cure.

‘ Buboes tending to suppuration, and indurated lymphatic glands, have sometimes been dispersed by these medicines; but in this respect likewise, they are inferior to other modes of treatment.

‘ Although the result of my own experience has not encouraged me to persist in the use of M. Alyon’s *Oxygenated Lard*,* several practitioners in London have composed an ointment (impregnated with nitrous acid) which is highly service-

* The following is the recipe for preparing M. Alyon’s oxygenated lard. Take two parts of pure nitric acid, and sixteen parts of recent hog’s lard; melt the lard in a glazed vessel, then add the acid, and, when the composition has boiled, remove it from the fire to cool.

The medicinal properties of this ointment will depend on the purity of the acid, the quantity of the lard, and the nicety of the preparation.

M. Alyon prepares two kinds; a weaker for the face, in pimples or tetters; and a stronger for herpetic or venereal ulcerations.

The oxygenated lard, when well prepared, neither resembles the citrine ointment without mercury, nor rancid lard; it has no taste: is dissoluble in water, neither yielding sebacic or nitric acid by washing; it is of a yellowish white colour, its consistence is between that of suet and virgin wax; it melts without alteration, and surprisingly facilitates the oxydation of metals; mercury triturated with it, only a few minutes, forms the blue or mercurial ointment. If the strength of the acid employed be not known—if we add too much of it, the excess will remain in the lard unconcreted, and its use will irritate the skin; if the acid be feeble, the proportion of oxygen will be deficient, and the remedy less active.

able in herpetic, impetiginous, and itchy eruptions. In such cases, I have repeatedly seen good effects from the nitrous mixture and lotion.

‘ Most of the local inconveniences which arise from an incautious use of mercury, such as ulcerated cheeks, swelled tongue, spongy gums, loose teeth, fetid breath, and profuse salivation, (however paradoxical it may seem,) have been more speedily and effectually relieved by the internal exhibition, of the acids, than by any other medical treatment hitherto employed; so that, for these purposes, I now trust to them confidently, and almost exclusively.

‘ Under no circumstances of disease, or peculiarity of constitution, has the oxygenated muriate of potash appeared to me preferable to the acids; but, on the contrary, the latter have proved much more beneficial and less injurious to the system, than the former. This remark, perhaps, will hold equally true of the oxygen gas; respecting which, however, the evidence is at present too defective to ground any solid conclusion upon. I think also, that very little reliance can be placed on the nitric acid bath, except for some cutaneous affections.

‘ I have never derived any manifest advantage from increasing the daily quantity of the acids to more than two drachms; and, in common, I find *one measured drachm* sufficient, either diluted in plain water only, or qualified with syrup, opium, or ardent spirits. For a lotion or injection, I mix from twenty to sixty drops of the concentrated acid, with a pint of pure water.

‘Of all the different acids, I have seen more benefit from the nitrous or nitric. The latter is more palatable, though not more efficacious, than the former: but in certain constitutions, none of the acids will agree; and in some cases, especially where considerable inflammation exists, it is highly improper to exhibit them. When they did not *speedily* improve the appetite, and afford an increase of vigour, I have seldom seen any future benefit to the general health from their continued exhibition.

‘Where “the saline antisiphilitics,” as they are called, have disagreed, some of the following unpleasant consequences ensued: viz. violent nausea, vomiting, flatulency, cardialgia, eroding pains in the stomach, diarrhæa, dysentery, obstinate constipation, heat in the bowels, constant itching of the skin, miliary eruptions, universal tremor, frequent cold shiverings, extreme giddiness, throbbing in the head, disordered intellect, erethismus, irregular palpitation of the heart, intermitting and quick pulse, dyspnæa, heat of urine, forcing pain of the uterus, diminished or suppressed secretion of bile, spitting of blood, hæmorrhage from the nose, ophthalmia, and phlogistic diathesis; to which may be added, in some few examples, an injurious effect on the enamel of the teeth, inflamed lips, swelled cheeks, deep ulcers of the tongue, and copious ptyalism.

‘I regard the chemical explanation which has generally been given of the *manner of operating* of the new remedies and of mercury, in the venereal

disease, as entirely hypothetical. But, whatever be their respective modes of action, their sensible effects are not strictly analagous to each other; for the salivation, now and then arising from the frec use of the acids, is very different from a mercurial ptyalism, being unaccompanied with a looseness of the teeth, spongy gums, or fetid breath; and their constitutional effects, in many particulars, seem of an opposite nature from those which are experienced by a long course of mercury'.

Mr. Blair further observes, that 'the oxygenated medicines are not specifics of the lues venerea; that they are totally devoid of real antisiphilitic virtue; and that in no case of the genuine disease can they be safely relied on: consequently they are unfit substitutes for merecury, wherever that mineral is plainly indicated; i. e. wherever a syphilitic affection actually exists. Other eminent practioners join in the general conclusion, that although the new remedies may improve the health, and suspend the symptoms of syphilis, they are not to be confided in for a permanent cure. They may, however, be usefully employed in some doubtful cases, or where the constitution had been previously saturated with mercury.'

The nitric acid has been successfully employed by Dr. Harrison to dissolve iron nails, accidentally getting into the human stomach. He mixed a drachm of the acid with an ounce of water, and gave two drachms of the mixture in a table-spoonful of water. The dose was repeated at first, seven times in the day; and in the course of six

days, more than seven ounces of the mixture were taken. Tincture of opium was occasionally added on account of the medicine griping.

The nails on passing were found to have their points destroyed, and other parts much corroded by the nitric acid.

Dulcified, or Sweet Spirit of Nitre; now called *Nitrous Ethereal Liquor* by the Dublin, and *Spirit of Nitrous Ether*, by the London and Edinburgh Colleges. Spirit of nitre has long been deservedly held in great esteem. It quenches thirst, promotes the natural secretions, expels flatulencies, and moderately strengthens the stomach. It may be given in doses of from twenty drops to an hundred, in any convenient vehicle. Mixed with a small quantity of the compound spirit of ammonia, (*sal volatile*,) it proves a mild, yet efficacious, diaphoretic, and often remarkably diuretic; especially in some febrile cases, where such a salutary evacuation is wanted.

A small proportion of this spirit added to malt spirits, gives them a flavour approaching to that of French brandy.

Lunar Caustic, now called *Nitrated or Nitrate of Silver*.—A strong solution of nitrate of silver corrodes and decomposes animal substances; in a more diluted state, it stains them of an indelible black; and for this purpose it is sometimes applied to the hair. The fused nitrate of silver is the strongest and most manageable caustic we

possess, and is used to remove warts, fungous excrescences, callous edges, strictures in the urethra, and the like. It is also employed to destroy the venereal poison in cancers, before it has acted upon the system.

A weak solution of it may be applied as a stimulus to indolent ulcers, or injected into fistulous sores.

Notwithstanding its causticity, it has been given internally. Boerhaave, Boyle, and others, commend it highly in hydropic cases. The former assures us, that made into pills with crumb of bread and a little sugar, and taken on an empty stomach, (some warm water sweetened with honey, being drunk immediately after,) it purges gently without griping, and brings away a large quantity of water, almost without the patient's perceiving it: that it kills worms, and cures many inveterate ulcerous disorders. He nevertheless cautions against using it too freely, or in too large a dose; and observes that it always proves corrosive and weakening to the stomach.

It has been more recently used, and according to Duncan, with success, in epilepsy and angina pectoris; he says that, each pill, which is a dose, should not contain more than one-eighth or one-fourth of a grain of the nitrated silver.

Muriatic or Marine Acid, formerly called *Spirit of Salt*.—The effects which this acid has on the animal economy, and the manner of its employment, coincides with the acids beforementioned:

but is distinguished from them by its rising in white fumes; by its peculiar pungent smell; by its enabling the nitrous to dissolve gold, preventing its dissolving silver, and precipitating silver previously dissolved, but producing no precipitation in solutions of calcareous earths.

The muriatic is the weakest of the mineral acids, but stronger than any of the vegetable: it is used chiefly as a menstruum for the making of other preparations; sometimes likewise it is given, properly diluted, for the gravel, for promoting appetite, and as an antiphlogistic, aperient, and diuretic. The dose is from ten to sixty or seventy drops.

Linnæus says, the muriatic acid, properly diluted, and applied as a lotion to chilblains, is a radical cure in a short time, and that without fear of a return.

The *dulcified* muriatic acid, has by some been held in great esteem against weakness of the stomach, indigestion, and other like complaints, brought on by irregularities.

Combined with volatile alkalies, the muriatic acid produces the officinal sal ammoniac. With the mineral fixed alkali, it regenerates common salt. With vegetable fixed alkalies, it forms a neutral salt of a sharper taste, and somewhat more difficult of fusion and solution, than common salt. With calcareous earths, it forms a very pungent saline compound. This salt is contained in considerable quantity, in sea water, and remains fluid after the crystallization of its other saline

matters : it is found also in sundry common waters, to which, like the calcareous nitre, it communicates according to its quantity, a greater or less degree of hardness, and indisposition to putrify : it is far more antiseptic than the perfect marine salt. It is said to be diuretic and lithontriptic : the medicine commonly sold as a lithontriptic, under the name of *liquid shell*, is, according to Aikin, no more than a combination of this kind, consisting of calcined shells dissolved in marine acid. These combinations have been chiefly prepared, by mixing the calcareous earth with sal ammoniac, and urging the mixture with a gradual fire, till the volatile alkali of the sal ammoniac is either dissipated in the air, or collected by distillation, and only its acid left incorporated with the earth : so much of the earth as is satiated with the acid, may be separated from the rest by elixation with water.

Dr. Smyth recommends the bedstead, furniture, and linen, of those infected with contagious fevers, to be frequently washed with a weak solution of the muriatic acid in water. When the foul linen is taken off, it should immediately be thrown into water impregnated with this acid ; the proportions may be as follows :—mix two table-spoonsful of the muriatic acid with each gallon of water required to soak the linen, &c. (the mixture being made previous to the garments being immersed.) Where the linen has been thus treated, *washers need not fear any danger from receiving the infection.*

The oxygenized, or *oxy-muriatic acid vapours*, have been recommended by De Morveau, as the best means of destroying contagion. As, however, they are deleterious to animal life, they cannot be employed in every situation.

For the mode of preparing this vapour, see the note to nitrous acid.

Terra Ponderosa, (*Heavy Earth*) now called *Barytes*:—it is found in most metallic veins, especially those of lead, differently combined, but chiefly with fixed air, or with viuriotic acid. The aërated barytes in powder has been long employed by the miners as a poison for rats and other vermin. Dr. Crawford first proposed barytes as a medicine for scrophula, and the form he recommended was, the solution of it in muriatic acid. Muriated barytes is made by dissolving the aërated barytes in a very dilute muriatic acid (namely the ordinary acid diluted with ten or twelve times its weight of water;) when the solution is saturated and filtered, it must be evaporated slowly, and set to crystallize. The best manner of ascertaining the dose, and of exhibiting this active medicine, is by means of a saturated solution of the crystallized salt in water, in the proportion of one part muriate of barytes, to three parts distilled water. The dose of the solution at first, is from five to ten drops two or three times a day, to be gradually and cautiously increased to as much as the patient can bear, by adding one drop to each

dose every second day: some constitutions bear forty drops. Its effects are to increase all the excretions, and to dispose ichorous sores to heal; it is generally said by writers on the *Materia Medica*, to be a *stimulant* deobstruent; and yet Hufeland, one of its greatest supporters, states, that it succeeds better in cases attended with inflammation and increased irritability, than with atony and torpor. When given in large doses, it certainly produces nausea, vomiting, diarrhæa, vertigo, and death. Some assert that this preparation is of advantage in no disease; while others bestow upon it the most unqualified praises. By the latter it is principally celebrated,—1. In all cases of scrophula.—2. In obstructions and tumors.—3. In case of worms.—4. In cutaneous diseases.

Barytes, reduced into a fine powder, as well as the solution, are used externally as stimulating and gently escharotic applications in cutaneous diseases, fungous ulcers, and specks upon the cornea.

Solution of Muriate of Lime:—This medicine has lately been introduced as a tonic; it is thus made:—take of pure carbonate of lime, (white marble) bruised in small pieces, nine ounces; muriatic acid, sixteen ounces; water, eight ounces; mix the acid with the water, and gradually add the pieces of carbonate of lime: the effervescence being over, digest for an hour. Pour off the liquor, and evaporate to dryness. Dissolve the residuum in its weight and a half of water, and

strain. It is directed to be given in doses of thirty drops to a person of an adult age; in peppermint-water, &c. : the dose to children is from five to twenty drops; the vehicle may be gruel, or syrup and water. If it purge, the dose should be diminished.

Muriate of lime, it has been said, possesses similar properties to barytes, so that it should be used with precaution. These medicines, like burnt sponge, seem to act by stimulating the lymphatic system, and thereby increasing the action of the absorbent vessels; they therefore should never be given to persons whose lungs are weak and irritable.

NEUTRAL, AND ALKALINE* SALTS; AND SALINE AND OTHER WATERS.

Purified Nitre, now called *Nitrate of Potass*, or *Potash*; is annually produced from the surface of the earth in many countries; the nitre used in this, is chiefly imported from the East Indies, and is purified from the sea salt with which it is mixed, by being dissolved in boiling water and filtering it. Nitre is frequently used in gargles, or formed into

* Some very important discoveries on the subject of alkalies, but which are unconnected with this subject, have been made known by Mr. Davy, Professor of Chemistry at the Royal Institution. A sketch of the two papers which he has just laid before the Royal Society, may be seen in Part I. of *Nicholson's Encyclopedia*.

lozenges, for inflammatory sore throats, &c.: for its other medicinal properties, dose, &c. see pages 19 and 20.

Large doses, such as an ounce of nitre, taken at one time, produce the most dreadful symptoms, constant vomiting, purging mixed with blood, convulsions, and death. Such accidents have not unfrequently happened from its being sold for *Glauber's Salt*, which is, with various other drugs, commonly vended in *country places* by *grocers*!

Vitriolated Tartar,* or *Sal Polychrest*; (salt of many virtues;) now called *Sulphat of Potass*, by the Edinburgh, *Vitriolated Kali*, by the London, and *Vitriolated Vegetable Alkali*, by the Dublin College: it is usually taken in small doses, as a scruple or half a drachm; alone, or mixed with rhubarb, and is a useful aperient: larger doses, as four or five drachms, operate as a mild cathartic, which does not pass off so hastily as sulphat of soda, and seems to extend its action further.

Glauber's Cathartic Salt, now called *Sulphate of Soda*, *Vitriolated Natron*, and *Vitriolated Fossil Alkali*: the title of this salt expresses its medical virtues. Taken from half an ounce, to an ounce or more, it proves a mild and useful purgative; and in smaller doses largely diluted (as is directed for Rochelle salt, in page 8,) a serviceable aperient and diuretic. It is commonly given in solution,

* *Salt of vinegar*, so called, is only vitriolated tartar impregnated with *acetic acid*.

but it may also be administered in powder, after it has effloresced. In this form the dose must be reduced to one half.

Epsom, or the *Bitter Purging Salt*, now called *Sulphat of Magnesia*, and *Vitriolated Magnesia*:—this was first prepared as a cheap substitute for the Epsom salt, and for those of other mineral waters, from many of which it does not considerably differ, either in sensible qualities, or medical effects. We usually meet with it in minute crystals, of a snowy appearance; dissolved in water, and crystallized afresh, it concretes, if properly managed, into large ones, resembling Glauber salt, for which they are sometimes substituted in the shops.

It is a mild and gentle purgative, operating with sufficient efficacy, and in general, with ease and safety; rarely occasioning any gripes, sickness, or other inconvenience with which purgatives of the resinous* kind are too often accompanied. Six

* Dr. George Fordyce, in a paper published in the second volume of the *Transactions of a Society in London for the Improvement of Medical and Chirurgical Knowledge*, says, ‘ he once conceived it would be much better to employ some simple medicine for each disease; but more mature experience has led him to believe that this opinion is not well founded. It is probable that the propensity to compound various drugs which has pervaded all ages, and all nations, must have had some foundation in a general experience of its advantage. Perhaps the framers of modern dispensatories have carried the principle of simplifying medicaments too far. In the chirur-

or eight drachms of Epsom salt may be dissolved for a dose, in a proper quantity of common water; or four or five drachms in a pint or quart of the

gical department they certainly have erred in this respect. Some of the more compound plasters and ointments of the old writers will be found to produce effects on the morbid actions taking place in tumours, as well as ulcers, however difficult it may be to account for the operation of the ingredients of which they consist, which will be expected in vain from the more simple applications at present in fashion.

‘ All purgatives have not the same effect, though they all produce more frequent and more copious evacuations from the intestines than take place in perfect health. For example, *natron vitriolatum* (Glauber’s salt) occasions a purging much sooner after it has been exhibited, than *aloes* or *rhubarb*. Again, *aloes* and *rhubarb* occasion an evacuation of feculent matter, while *natron vitriolatum* ordinarily occasions an evacuation of a watery fluid. If an evacuation is wanted sooner than would take place from employing *aloes* and *rhubarb*, and, at the same time, an evacuation of feculent matter, it evidently would be better to mix *natron vitriolatum* with *aloes* or *rhubarb*, than to use either *aloes* or *rhubarb* alone, or the *natron vitriolatum* alone; and such mixture is actually found to produce a quicker evacuation, and at the same time a more feculent one than the *aloes* or *rhubarb*, or the *natron vitriolatum* would have produced singly. It is therefore evident, that if such was the intention of the practitioner, it would be better for him to use a mixture of *aloes* and *natron vitriolatum*, or a mixture of *rhubarb* and *natron vitriolatum*, than it would be to use either *natron vitriolatum*, *rhubarb*, or *aloes* by itself.

‘ This then is a case in which it is evidently useful to mix two purgatives together instead of employing one of them alone, and therefore it is better in some cases to employ medicines mixed together, when their general operation is of the same kind.’

Cheltenham or any other purging mineral water. The solution may be so managed as to promote evacuations by the other emunctories: if the patient be kept warm, they increase perspiration: and by moderate exercise in the cool air the urinary secretion. Some alledge this salt has a peculiar effect in allaying pain, as in colic, even independently of evacuation.

Vitriolated magnesia is contained in several mineral springs, and in sea water, from which it is obtained by evaporation. It is principally used for the preparation of magnesia.

For an account of Rochelle salt, now called tartrite of potass and soda, or tartarized natron; also for Dr. Pearson's tasteless purging salt, or phosphate of soda; and for the Brazil salt, see pages 7, 8, and 9. And for an account of cream of tartar, or super-tartrite of potass; and likewise for soluble tartar, now called tartrite of potass, tartarized or tartarate of kali, see page 21.

Lixivium, or *Oil of Tartar*, called *Water of Prepared Kali*, by the London, and *Mild Ley*, by the Dublin College: its effect is the same as the prepared kali, from which it is made by setting it in a moist place till it deliquesce, and then strain. But it is recommended as a very considerable improvement of this preparation, to dissolve crystallized prepared kali in a determinate proportion of water.

Caustic Ley, called also *Water of Potass*, or *Water*

of *Pure Kali*: it is made with quick-lime and prepared kali. The solution of caustic potass, under various names, has at different times been celebrated as a lithontriptic, and has as often fallen again into disuse. The very contradictory accounts of its effects as a solvent, are now in some degree explicable, since it has been discovered that urinary calculi are very different in their natures, so that some of them are only soluble in acids, and others only in alkalies. Of the last description are the calculi of uric (formerly called *lithic*) acid, which are very frequent, and those of urate of ammonia. On these, therefore, alkalies may be supposed to make some impression; and that alkalies or alkaline carbonates, taken by the mouth, have occasionally relieved calculous complaints, is certain; but their continued use debilitates the stomach. M. Fourcroy has proposed applying the remedy immediately to the disease, by injecting into the bladder a tepid solution of potass or soda, so dilute that it can be held in the mouth. Before the alkaline solution be injected, the bladder is to be completely evacuated of urine, and washed out with an injection of tepid water. After the alkaline injection has remained in the bladder half an hour or more, it is to be evacuated and allowed to settle. If, on the addition of a little muriatic acid, a precipitate be formed, there is reason to conclude that the calculus contains uric acid, and that the alkali has acted on it.

Externally alkaline solutions have been more frequently used, either very dilute, simply as a

stimulus, in rickets, gouty swellings, gonorrhœa, and spasmodic* diseases, or concentrated as a caustic to destroy the poison of the viper, and of rabid animals.

Mephitic Water, or Water Impregnated with Fixed Air; i. e. Carbonic Acid.—Take of white marble in powder, three ounces; diluted sulphuric acid, mixed with an equal quantity of water, a pound and a half; mix them gradually in Dr. Nooth's apparatus, improved by Parker, and let the air evolved pass through six pints of pure spring water, placed in the upper part of the apparatus, and frequently agitated until it shall have acquired a subacid taste. If a larger quantity of this water be required to be prepared, the apparatus of Dr. Woulfe's is preferable.

* Dr. Haigens says, he has tried alkalies internally in convulsive diseases; and that agreeably to the suggestions of Humboldt, and the experience of Dr. Michaelis, he has found them generally succeed. In cramps of the stomach, and in tetanic convulsions of children, the same remedy is mentioned as having afforded much relief.

Dr. Blane recommends alkalies in stomach complaints, and also in cutaneous eruptions, especially such as appear to be connected with disorders of the digestive faculties,—*gutta rosacea* (a redness with tubercles in the face) &c. He gave lime water and pure alkali; the former in doses of from three to six ounces two or three times a day, and the latter from six to sixteen grains, or in a concentrated solution, *i. e.* water of pure kali, of which, from twenty to thirty drops were taken as often; properly diluted in a watery vehicle. He has observed a manifest superiority of the mineral over the vegetable alkali, in complaints of the stomach.

In proportion to the coldness of the air and the extent of pressure employed, the liquor will be the better : it should be kept in well stopped vessels, and in a cool place.

An artificial purging mineral water, answering, perhaps, all the intentions of the natural purging mineral waters, and acting more uniformly in regard to strength, may be made by dissolving an ounce, or more if required, of Rochelle, Epsom, or Glauber's salt, in a quart or two of spring water, and afterwards impregnating it with the carbonic acid gas. A small quantity of sea or common salt may also be added to the solution. If the Cheltenham, or any other purging *chalybeate* water is meant to be imitated, let iron wire be suspended in this solution, according to the directions given in page 11.

Aërated, or Mephitic Alkaline Water ; now called *Solution of Super-Carbonate of Potass*, or *Solution of Mild Vegetable Alkali*.—Dissolve one ounce of carbonate of potass in ten pints of water, and expose it to a stream of carbonic acid arising from the mixture of the marble dust, sulphuric acid, and water.—Edinburgh Dispensatory.

The Dublin Pharmacopæia directs an ounce and a half of the alkali to be dissolved in only six pints of water, and to employ a double quantity of the marble and acid to saturate the water.

In this solution the alkali is combined with excess of carbonic acid, by which means it is better adapted for internal use, as it is rendered not only

more pleasant to the taste, but is less apt to offend the stomach. Indeed, it is the only form in which the alkaline salt can be exhibited in sufficient doses, and for a sufficient length of time, to derive much benefit from its use in calculous complaints. It has certainly been frequently of advantage in these affections, but probably only in those instances in which the stone consists of uric acid, or uriate of ammonia; for although supersaturated with carbonic acid, yet the affinity of that acid for potass is so weak, that it operates as an alkali.

Six or eight ounces may be taken two or three times a day. It in general proves powerfully diuretic, and sometimes produces inebriation. This last effect is ascribed to the carbonic acid.

*Soda Water, or Water of Super-Carbonate of Soda;** is prepared from ten pounds of water, and two ounces of carbonate of soda, in the same manner as the water of supercarbonate of potass. By super-saturating soda with carbonic acid, it is rendered more agreeable to the palate, and may be taken in large quantities, without affecting the stomach. For an account of its virtues, see p. 11.

Purified Soda, or Fixed Fossil Alkaline Salt; now called *Carbonate of Soda*, by the Edinburgh, *Mineral Fixed Alkaline Salt*, or *Prepared Natron*, by the London, and *Mild Fossil Alkali*, by the Dublin College: is contained in great abundance in the

* The mixtures of salts sold as '*Soda Powder*,' are perfectly inefficacious.

waters of the ocean, and makes the basis of the neutral salt so plentifully extracted from them for alimentary uses. It is likewise discoverable in sundry mineral springs, even those which do not participate of sea salt.

The *Seltzer waters* are no other than a dilute solution of this salt mixed with a little earthy matter: twelve ounces of the water, according to Hoffman's analysis, yield a scruple of the pure alkali. It is also found combined with carbonic acid, on the surface of the earth in Egypt, Syria, Barbary, Hungary, &c. and is obtained by the incineration of marine vegetables.

In medicine this salt possesses similar virtues to the carbonate of potass, but is milder or less acrid to the taste, melts easier in the fire, requires more water for its solution, and from its crystallizability and efflorescence when exposed to the air, is preferable to it; because its dose may be more accurately ascertained, and it may be given either in the form of powder, or made up into pills. **DOSE:** from ten to twenty grains, or if given in solution, it may be further increased.

The mineral alkali affects the stomach and intestinal canal less than the vegetable alkali; when made caustic by lime, it proves greatly inferior to the latter in dissolving the urinary calculus.

Alkaline salts attenuate the mucus, act as stimulants on the lymphatic system, and favour secretion and absorption; they destroy acidities in the *primæ viæ*, which have such influence in the

formation of scrophula, and they increase considerably the quantity of urine.

The crystallized aërated or carbonated potass, or soda, is easily prepared by exposing these salts in solution, to the contact of the air for a considerable time, or by making a stream of carbonic acid gas pass through a solution of them, or by distilling them with carbonate of ammonia, *i. e.* volatile alkaline salt, or prepared ammonia. For an account of their superiority in saline draughts, &c. see pages 9, 10, and 11.

Absorbent earths, and particularly magnesia, which is the mildest of all, destroy acidities; but they fatigue the stomach, and should not be given in large doses.—For a particular account of absorbent earths, see page 81, &c.; and also for an account of sal ammonia (*muriate of ammonia*,) and its preparations, see page 70, &c.

Sea Salt, or Common Salt; now called *Muriate of Soda*: is one of the most important articles in the arts, and in domestic economy. As a medicine, it is useful in some cases of dyspepsia; and in large doses it is said to check vomiting of blood, and to destroy worms. See vol. I. of *The Medical Transactions of the London College*.

It is a common ingredient in stimulating clysters, and is sometimes applied externally as a fomentation to bruises, or, in the form of bath, as a gentle stimulus to the whole surface of the body.

Common salt differs from other saline substances

in occasioning drought, and tending not to cool, but rather to heat the body. It prevents putrefaction less than most others, and in a small quantity such as is taken with food, promotes it: by this quality it probably assists the resolution of aliment in the stomach, at the same time it proves a mild stimulus to that viscus itself. Salted animal foods are generally, perhaps justly, accounted one of the principal causes of the scurvy at sea; not that the salt is of itself prejudicial, but on account of its being incapable of preserving the animal subjects for a length of time, in a perfectly uncorrupted state. Pure sea salt, and sea water, are rather salubrious than hurtful, both in the true scurvy, and in impurities of the blood and humours in general. In considerable doses they act as purgatives: Hoffman observes, that an ounce of sea salt dissolved in a proper quantity of water, occasions commonly six stools or more, without uneasiness; that this salt checks the operation of emetics, and carries them off by stool; that in clysters it is more effectual, though used only in the quantity of a drachm, than any of the purgatives; and that where other clysters fail of opening the belly, a solution of common salt takes place.

OLIVE OIL AND SOAPS.

Good olive oil should have a pale yellow colour somewhat inclining to green, a bland taste, without any rancidity, and no smell. In this country it is frequently rancid, and sometimes adulterated.

Taken internally it operates as a gentle laxative, and is given in cases of worms (see note to page 98). It is also given in large quantities to mitigate the action of acrid substances taken into the stomach. It is used externally in frictions, gargles, and in clysters; but its principal employment is for the composition of ointments and plasters.

Soap.—The only species which is officinal in our Pharmacopæias, is that composed of olive oil and soda. It is prepared in the countries which produce the oil. For medicinal use the Spanish is preferable.

Soap is decomposed by all the acids, earths, and earthy and metalline salts. The acids combine with the alkali, and separate the oil. The earths form an insoluble earthy soap with the oil, and separate the alkali, while with the salts there is a mutual decomposition: the acid combines with the alkali, and earthy or metalline soaps are formed.

The detergent property of soap, or the power it possesses of rendering oily and resinous substances miscible with water, has given rise to very erroneous notions of its medical virtues. It was supposed to render such substances more readily soluble in the juices of the stomach, and in the fluids of the body, and to be well fitted for dissolving such oily or unctuous matters as it may there meet with, attenuating viscid juices, opening obstructions of the viscera, and deterging all the vessels it passes through. It has likewise been

supposed a powerful menstruum for the urinary calculus; and a solution of soap in lime water, has been considered as one of the strongest dissolvents that can be taken with safety into the stomach: for the virtue of this composition has been thought considerably greater than the aggregate of the dissolving power of the soap and lime water when unmixed.

How erroneous those ideas are, appears evident, when we recollect the very easy decomposition of soap, which renders it perfectly impossible that it should enter the circulating system, or indeed come into contact with the fluids even of the mouth, without being decomposed. As to the solution of soap in lime water, it is only a clumsy way of exhibiting a solution of soda; for the soap is decomposed, an insoluble soap of lime is formed, and the soda remains in the solution. The internal use of soap should therefore be confined to the giving form to other substances which are not decomposed by it, and to the decomposing of metallic poisons when they have been taken into the stomach. For this last purpose, a teacupful of a solution of soap, in four times its weight in water, may be drunk every three or four minutes, until a sufficient quantity be taken.

Applied externally, it is a very powerful detergent, and combines the stimulating properties of the alkali with the lubricating nature of the oil. In this way it often proves a powerful discutient, and a useful application to sprains and bruises. For the manner of making the volatile soaps, or

liniments, see page 72; and for preparing the anodyne balsam, Steers's and other solid and liquid opodeldocs, soap-plaster, &c. see Appendix, Part II.

MEDICINAL AND COMMON WATERS.

Lime Water.—Take of lime recently burnt; boiling water, each one pound. Put the lime into an earthen vessel, and sprinkle the water upon it, keeping the vessel shut while the lime grows warm and falls into powder; then pour upon it twelve pounds of water, and shut the vessel, agitating it frequently for twenty-four hours; lastly filter the water through paper, placed in a covered funnel, and keep it in well-closed bottles. (Dublin Pharmacopæia)

Lime water possesses astringent powers; it is also a powerful anti-acid, or at least it combines and neutralizes acids when it comes in contact with them; it likewise dissolves mucus, and destroys worms. From possessing these properties, it is used in diseases supposed to arise from laxity and debility of the solids, as diarrhæa, diabetes, leucorrhœa, scrophula, and scurvy; in affections of the stomach, accompanied with acidity and flatulence; when the intestines are loaded with mucus: and in worms. Lime water is scarcely capable of dissolving, even out of the body, any of the substances of which urinary calculi consist; it has therefore no pretensions to the character of a li-

lithontriptic. It has been also recommended in some kinds of cancers, and in chronic cutaneous diseases. Externally it is applied to ill-conditioned ulcers; gangrenous sores; as a wash for the itch and scald head; and as an injection in gonorrhæa, fistulas, and ulcers of the bladder. For an account of its utility in recent burns and scalds, when mixed with cold drawn linseed oil and for preparing the same, see page 149.

When taken internally, the taste of lime water is best covered with lukewarm milk. Its dose is commonly from two to four ounces frequently repeated; but when long continued it weakens the organs of digestion.

Tar Water is a healing diuretic and sudorific remedy, but by no means so powerful, or so generally admissible as it was represented by Bishop Berkeley. Tar is applied externally in scaldhead, and some other cutaneous diseases.

Common Water.—The following interesting account is extracted from the 4th edition of Duncan's Edinburgh New Dispensatory:—

Water does not enter the list of materia medica of any of the colleges, but it is so important an agent, both in the cure of disease, and in the practice of pharmacy, that a brief account of its varieties and properties can scarcely be considered as superfluous.

The purest natural water is snow, or rain water, collected in the open fields; that which falls in towns, or is collected from the roofs of houses, is contaminated with soot, animal effluvia, and other impuri-

ties, although after it has rained for some time, the quantity of these diminishes so much, that Morveau says, that it may be rendered almost perfectly pure by means of a little barytic water, and exposure to the atmosphere. Rain water, after it falls, either remains on the surface of the earth, or penetrates through it until it meet with some impenetrable obstruction to its progress, when it bursts out at some lower part, forming a spring or well. The water on the surface of the earth, either descends along its declivities in streams, which gradually wearing channels for themselves, combine to form rivers, which at last reach the sea, or remain stagnant in cavities of considerable depth, forming lakes or ponds, or on nearly level ground forming marshes.

The varieties of spring water are exceedingly numerous; but they may be divided into the soft, which are sufficiently pure to dissolve soap, and to answer the purposes of pure water in general; the hard, which contain earthy salts and decompose soap, and are unfit for many purposes, both in domestic economy and in manufactures; and the saline, which are strongly impregnated with soluble salts. When spring waters possess any peculiar character they are called mineral waters. River water is in general soft, as it is formed of spring water, which by exposure becomes more pure; and running surface water, which although turbid from particles of clay suspended in it, is otherwise very pure. Lake water is similar to river water. The water of marshes on the contrary is exceedingly impure, and often highly fetid, from the great proportion of animal and vegetable matters which is constantly decaying in them.

Mineral waters derive their peculiarity of character, in general, either from containing carbonic acid, or soda, not neutralized, sulphuretted hydrogen, purging salts, earthy salts, or iron; or from their temperature exceeding in a greater or less degree that of the atmosphere. The following are the most celebrated:—

- a. Warm springs.—Bath, Bristol, Buxton, Matlock, in England. Barege, Vichy, &c. in France. Aix-la-Chapelle, Borset, Baden, Carlsbad, and Toeplitz,

in Germany; and Pisa, Lucca, Baia, and many others in Italy.

- b.* Carbonated springs.—Pyrmont, Seltzer, Spa, Cheltenham, Scarborough.
- c.* Alkaline.—Carlsbad, Aix-la-Chapelle, Barege, Toeplitz.
- d.* Sulphureous.—Enghien, Lu, Aix-la-Chapelle, Kilburn, Harrogate, Moffat, and many in Italy.
- e.* Purging.—Sea water, Lemington Priors, Harrogate, Lu, Carlsbad, Moffat, Toeplitz, Epsom, Sedlitz, Kilburn, and all brackish waters.
- f.* Calcareous.—Matlock, Buxton, and all hard waters.
- g.* Chalybeate.—Hartfell, Denmark, Cheltenham, Pyrmont, Spa, Tunbridge, Bath, Scarborough, Vichy, Carlsbad, Lemington Priors.

Medical use.—Water is an essential constituent in the organization of all living bodies; and as it is continually expended during the process of life, that waste must be also continually supplied, and this supply is of such importance that it is not left to reason or to chance, but forms the object of an imperious appetite. When taken into the stomach, water acts by its temperature, its bulk, and the quantity absorbed by the lacteals. Water about 60° gives no sensation of heat or cold, between 60° and 45° it gives a sensation of cold followed by a glow and increase of appetite and vigour, below 45° the sensation of cold is permanent and unpleasant, and it acts as an astringent and sedative; above 60° it excites nausea and vomiting, probably by partially relaxing the fibres of the stomach, for when mixed with stimulating substances it has not these effects. In the stomach, and in the intestines, it acts also by its bulk, producing the effects arising from the distension of these organs; and as the intestinal gases consist of hydrogen gas, either pure or carbonated, or sulphuretted, or phosphuretted, it is probably in part decomposed in them. It likewise dilutes the contents of the stomach and intestines, thus often diminishing their acrimony. It is absorbed by the lacteals, dilutes the chyle and the blood, increases their fluidity, lessens

their acrimony, and produces plethora. Its effects in producing plethora and fluidity are however very transitory, as it at the same time increases the secretion by the skin and kidneys. Indeed the effects of sudorifics and diuretics depend in a great measure on the quantity of water taken along with them.

Mineral waters have also a specific action depending on the foreign substances which they contain. It is however, necessary to remark that their effects are in general much greater than might be expected from the strength of their impregnations, owing probably to the very circumstance of their great dilution, by which every particle is presented in a state of activity, while the lacteals admit them more readily than they would in a less diluted state.

Carbonic acid gas gives to the waters which are strongly impregnated with it a sparkling appearance, and an agreeable degree of pungency. In its effects on the body it is decidedly stimulant, and even capable of producing a certain degree of transient intoxication. It is of great service in bilious complaints, atony of the stomach, nausea, and vomiting, and in all fevers of the typhoid type.

Alkaline waters produce also a tonic effect on the stomach, but they are less grateful. They are particularly serviceable in morbid acidity of the stomach, and in diseases of the urinary organs.

Sulphureous waters are chiefly used in cutaneous and glandular diseases. Their effects are stimulant and heating, and they operate by the skin or bowels.

Purging waters derive their effects from the neutral salts they contain, especially the muriates of soda, lime, and magnesia, and the sulphates of soda and magnesia. They are much more frequently used for a length of time to keep the bowels open by exciting the natural action, than to produce full purging. Used in this way, instead of debilitating the patient, they increase his appetite, health, and strength.

Chalybeate waters are used as tonics. They stimulate considerably, and increase the circulation ; but as they

also generally contain neutral salts, they act as gentle laxatives. They are used in all cases of debility, cachexia, chlorosis, flnor albus, amenorrhœa, and in general in what are called nervous diseases.

The external use of water depends almost entirely on its temperature, which may be

1. Greater than that of the body, or above 97° F.
The hot bath.
2. Below the temperature of the body.
 - a. From 97 to 85, the warm bath.
 - b. From 85 to 65, the tepid bath:
 - c. From 65 to 32, the cold bath.

The hot bath is decidedly stimulant in its action. It renders the pulse frequent, the veins turgid, the skin red, the face flushed, the respiration quick, increases animal heat, and produces sweat. If the temperature be very high, the face becomes bathed in sweat, the arteries at the neck and temples beat with violence, anxiety and a sense of suffocation are induced, and if persisted in, vertigo, throbbing in the head, and apoplexy, are the consequences. It is very rarely employed in medicine except where there are hot springs, as at Baden in Switzerland. The Russians and some other nations use the hot bath as an article of luxury.

The effects of the affusion of hot water have not been ascertained, and it is probable that when the heat is not so great as to destroy the organization of the skin, the very transient application of the water would be more than counteracted by the subsequent evaporation.

With regard to the action arising from their temperature, all baths below 97° differ only in degree, as they all ultimately abstract caloric (heat) from the surface, but with a force inversely as their temperature.

The warm bath excites the sensation of warmth, partly because our sensations are merely relative, and partly because its temperature, though less than that of the internal parts of the body, is actually greater than that of the extremities which are the chief organs of touch. But as water is a much better conductor of caloric than air, and especially than confined air, as much caloric is ab-

stracted from the body by water, which is only a few degrees lower than the internal temperature of the body, as by air of a much lower temperature. The warm bath diminishes the frequency of the pulse, especially when it has been previously greater than natural; and this effect is always in proportion to the time of immersion. It also renders the respiration slower, and lessens the temperature of the body, relaxes the muscular fibre, increases the bulk of the fluids by absorption, removes impurities from the surface, promotes the desquamation and renewal of the cutical, and softens the nails and indurations of the skin.

The stimulant power of the warm bath is therefore very inconsiderable, and its employment in disease will be chiefly indicated by preternatural heat of the surface and frequency of the pulse, rigidity of the muscular fibre, and morbid affections of the skin. It has accordingly been found serviceable in many cases of pyrexia, both febrile and exanthematous, in many spasmodic diseases, and in most of the impetigines. It is contra-indicated by difficulty of breathing, and internal organic affections, and should not be used when the stomach is full.

The affusion of warm water very generally produces a considerable diminution of heat, a diminished frequency of pulse and respiration, and a tendency to repose and sleep; but its effects are not very permanent, and its stimulus is weak. It is recommended in febrile diseases depending on the stimulus of preternatural heat, and in those attended with laborious respiration, and in the paroxysms of hectic fever.

As the tepid bath and affusion produce effects intermediate between those of warm and cold water, it is unnecessary to enumerate them.

The cold bath produces the sensation of cold, which gradually ceases, and is succeeded by numbness. It excites tremors in the skin, and shivering. The skin becomes pale, contracted, and acquires the appearance termed goose-skin. The fluids are diminished in volume, the solids are contracted, the calibre of the vessels is lessened, and therefore numbness and paleness are in-

duced, and the visible cutaneous veins become smaller. There is a sense of drowsiness and inactivity, the joints become rigid and inflexible, and the limbs are affected with pains and spasmodic contractions. The respiration is rendered quick and irregular, the pulse slow, firm, regular, and small; the internal heat is at first diminished, but gradually and irregularly returns nearly to its natural standard; the extremities, however, continue cold and numb, or swollen and livid; the perspiration is suppressed, and the discharge of urine is rendered more frequent and copious. If the cold be excessive on its application, long continued violent shiverings are induced, the pulse ceases at the wrist, the motion of the heart becomes feeble and languid, there is a sensation of coldness and faintness at the stomach, and a rapid diminution of animal heat; and at last, delirium, torpor, and death, are the consequences. If the application of the cold bath be not carried to an excessive length, on emerging from the water, the whole body is pervaded by an agreeable sensation of warmth, and the patient feels refreshed and invigorated.

The primary action of the cold bath is stimulant, and the degree of this action is in proportion to the lowness of its temperature. This opinion is indeed directly opposite to a theory of cold which has been advanced with the confidence of demonstration. "Heat is a stimulus; cold is the abstraction of heat; therefore cold is the abstraction of stimulus, or is a sedative." To this we might oppose another theory, equally syllogistic, and nearer the truth: free caloric is a stimulus; cold is the sensation excited by the passage of free caloric out of the body; therefore cold is a stimulus. But in fact the action of cold is by no means so simple. It is complicated, and varies according to its intensity, duration, and the state of the system to which it is applied. It acts at first as a stimulant, in exciting sensation, then as a tonic, in condensing the living fibre; and, lastly, however paradoxical it may appear, as a sedative, by preventing that distribution of blood in the minute and ultimate vessels, which is necessary for the existence of sensibility

and irritability, and by the abstraction of the stimulus of heat.

The cold bath may be therefore so managed as to procure any of these effects by regulating the length of time for which it is applied.

Cold affusion, or the pouring of cold water over the body, is a very convenient way of applying the cold bath in many cases. In this way cold is very suddenly applied to the surface, its operation is instantaneous and momentary, but may be continued by repeated affusions for any length of time, and so as to produce its extreme effects. Where the effects of cold affusion may be thought too severe, spunging the body with cold water, or water and vinegar may be substituted.

The application of cold may be employed in fevers and febrile paroxysms, when the heat is steadily above the natural standard, and in many diseases arising from relaxation and debility. It is contraindicated when the heat of the body is below 97° , when there is any notable perspiration from the surface, and when there is general plethora. Irritable habits should be defended from the violence of its action, by covering the body with flannel.

In yellow fever, especially in those cases in which the heat of the skin is excessive, it is particularly useful; and ought to be long continued. In phrenitis, and other local inflammations, it promises to be of advantage. In gout its effects are doubtful, being in some instances salutary, in others destructive. A criterion, to enable us to determine when it ought or ought not to be resorted to in this disease, is much wanted. In inflammatory rheumatism and rheumatic gout it is decidedly useful. It is of advantage in all the hæmorrhagies and exanthemata; in tetanus, colic, cholera, hysteria, mania, ischuria, and in burns; and in general in all those local diseases in which solutions of acetite of lead, of muriate of ammonia, &c. are usually employed; for the good effects of these depend almost entirely on their diminished temperature."

For particular accounts and methods of analysing mineral waters, see Bergman's *Treatise*, and Kir-

wan's *Essay*, published in 1778, and 1779:—See also Dr. Saunder's *Treatise* on the 'Chemical History and medical Powers of the most celebrated Mineral Waters.'

ALCOHOL, AND PROOF SPIRIT.

Alcohol, or rectified spirit of wine.—On the living body alcohol acts as a most violent stimulus ; it coagulates all the fluids of animal bodies, that have been tried, except bile and urine. Applied externally, it strengthens the vessels, and thus may restrain passive hæmorrhagies. It instantly contracts the extremities of the nerves it touches, and deprives them of sense and motion ; by this means easing them of pain, but at the same time destroying their use. Hence, employing spirituous liquors in fomentations, notwithstanding the specious titles of vivifying, heating, restoring mobility, resolving, dissipating, and the like, usually attributed to them, may sometimes be attended with unhappy consequences. These liquors received undiluted into the stomach, produce the same effects, contracting all the solid parts which they touch, and destroying, at least for a time, their use and office ; if the quantity be considerable, a palsy or apoplexy follows, which ends in death. Taken in small quantity, and diluted, they act as a cordial and a tonic : if longer continued, the senses are disordered, voluntary motion is destroyed, and at length the most fatal consequences ensue. Vinous spirits,

therefore, in small doses, and properly diluted, may be applied to useful purposes in the cure of diseases, &c. ; whilst in the larger ones they produce the most deleterious effects.

Their moderate use is the most serviceable to those who are exposed to heat and moisture, to corrupted air, or other causes of colliquative and putrid diseases ; the most pernicious in the opposite circumstances, and to those who are afflicted with hysterical or hypochondriacal complaints ; for whatever temporary relief these spirituous cordials may afford in the lownesses to which hysterical and hypochondriacal persons are subject, there are none, says Dr. Pemberton, who feel so soon the ill effects arising from their habitual use. For an account of *aromatics or spices, cardiacs, French liqueurs, &c.* see page 160—171.

Alcohol dissolves distilled vegetable and animal oils, and all the pure resins ; it is the lightest of almost all the known liquids ; a measure which holds ten ounces by weight of water, will contain little more than eight and a quarter of pure spirit.

Diluted Alcohol, Spirit of Wine, or Proof Spirit. Alcohol mixed with an equal quantity of water, being somewhat weaker than proof spirit, its specific gravity is to that of distilled water as 935 to 1000. (Edinburgh.) The London and Dublin Colleges order it of the specific gravity of 930, which, according to the former, contains 55 parts of pure alcohol, and 45 of water. Diluted alcohol should always be thus prepared : instead of it,

an impure spirit of the requisite strength is commonly employed.

DIET AND REGIMEN.

PROPER attention to diet and regimen being of the first consequence to sick persons and convalescents, I have annexed a general table. To those recovering from malignant fevers, or other acute diseases, more especially in tropical climates, and who approve the doctrine of repairing strength and loss of substance by rich diet and a free portion of good liquor, I would strongly recommend the following remarks:—

As these fevers more particularly affect the viscera of the abdomen, viz. *liver, spleen, mesentary*, and the *alimentary* canal, rich diet is directly contrary to the end proposed of recovering them from those obstructions; for a slender acquaintance with the laws of the animal economy may teach us, that the bad effects of inflammatory diet are immediate and direct, where the disease is seated in the alimentary canal, and no less productive of bad consequences when the liver or other parts are affected.

A contrary mode of living will, therefore, be more judicious and effectual:—*Whey, milk, barley, gruel, rice, sago, tapioca, arrow root*, and things of a similar nature, together with good and well-ripened fruits, and drinks of the *acidulous* kind, should form, *at first*, the only nutriment.

Dr. Heberden, senior, in his History of Diseases and their Cure, has the following observations on the subject of *diet*; concerning which physicians

have, in his opinion, taken much needless trouble, and imposed restrictions with too much nicety:—

Mankind in general, are well enough informed from their own experience, of the relative salubrity of different species of food, and are frequently taught by the subsequent sensations of their own stomachs, that disease instead of nutrition is the effect of a variety and piquancy of dishes.

One of the Medical Reviews contains the following remarks on this subject:—

With respect to drink indeed, Dr. Heberden thinks it necessary to enjoin particular caution, a caution unfortunately wholly at variance with the fashion of the times, and with national prejudices. We ought to be content, says he, with pure water, or small beer; as for wine and spirits, whether diluted or otherwise, they are to be shunned as '*cane pejus et angue*,' (i. e. something worse than a mad dog or viper.) The English take a larger portion of animal food than most other nations, except when under the dominion of disease, at which times they loath it most of all; but it is thought, that in the highest degrees of fever, broths, and gelatinous preparations are perfectly safe. Even milk and eggs, though prohibited in every species of fever by some writers, our author imagines may be taken with impunity in the worst, provided they are palatable to the patient. In regard to drink, in febrile diseases, he seems to agree with most modern practitioners, and to allow that it is of no importance whether the water be warm or cold, nor what quantity be swallowed, so long as the patient's inclination is consulted. In all diseases whatever, he would also allow the latter to quit or keep his bed according to his own inducement, unless insanity or delirium rendered it unfit for the diseased person to determine for himself. The fear of changing the linen, and of the smell of soap, has luckily now ceased to require being combated.

TABLE OF DIET.

Simple Diluents. — Pure or distilled water; aërated, soda, or Seltzer waters: Malvern, Bristol, and other waters; water with toasted bread, or sliced lemon or apples, or with currant jelly or tamarinds; barley water or decoction; *thin* water gruel; milk and water; almond milk, or emulsion; whey; lemonade; oxycrate, i. e. vinegar and honey diluted with water; imperial water: bohea, balm, bran, ground-ivy, coltsfoot, sage, mint, or orange and lemon peel teas.

Cordial Diluents. — The natural or artificial aërated waters; brisk small or spruce beer; porter, perry, or cyder, diluted with water; saline effervescing draughts; wine or brandy and water, made *weak*; the aërated waters; fresh milk; butter milk;* egg water; cocoa, coffee, chocholate, or souchong tea; wine, orange, lemon, or mustard *wheys*.

Simple Diet. — Asses or cows milk;† pearl barley, boiled; gruel; rice gruel; rice milk; jelly

* In an early stage of consumption, a free use of butter-milk is recommended as having frequently been attended with much advantage. In order to make it sit easy on the stomach, it should at first be taken sparingly, and joined with some agreeable aromatic.—See *Nisbett on Diet*.

† Milk is a valuable remedy in pulmonary consumptions, &c.; that of the ass is usually preferred, but it cannot so readily be obtained as cows milk, which, to

of rice, &c.; boiled rice pudding; tapioca; tapioca pudding; boiled bread; light bread, macaroni, or vermicelli puddings; sago; salep; Indian arrow-root powder; Iceland moss, or eatable liverwort; panada; chicken panada; chicken, mutton, and beef teas; fresh eggs; egg water.

Restorative Diet.—Milk, and new-laid eggs; cocoa, coffee, and chocolate; bread, rice, tapioca, and other light puddings; arrow-root powder; eatable liverwort; tapioca; sago; salep; and also jellies (occasionally;) with milk, wine, spices, &c.; chicken, veal, or mutton broths, or light meat soups; fowls, rabbits, veal, mutton, roast beef; *small* eels; flounders, and other flat fish; oysters, and shell-fish.

Mild liquid Aperients.—Roasted apples, in water; tamarind water; imperial water; fresh whey; currant gruel; castor oil, (cold drawn.)

Mild solid Aperients.—Roasted apples, or stewed prunes; manna; cream of tartar; magnesia, (cal-

produce a good effect, should make a considerable part of diet. Consumptive persons ought to take it at least four times a day, eating a little bread with it. If the milk should happen to purge, add to it a small quantity of prepared crab's claws in powder, or the electuary, or lozenges of red-rose buds.—(See page 182.) Cows milk, although not so easily digested as the milk of asses or mares, may be rendered much lighter by allowing it to stand for some time, and then taking off the cream.

cined;) Russia rhubarb; lenitive electuary, or pills of senna.

For the manner of preparing *almond* and other *emulsions*, &c.; *barley water*, *arrow-root powder*, *Iceland moss*, or *liverwort*, &c. see pages 150—155.

REMARK.—Food may frequently be administered to the sick, by little at a time; their wandering desires for different things not manifestly injurious, may not unfrequently be gratified with advantage. Convalescents are best recruited by taking jellies, cold meats, &c. seasoned with *aromatics*, and pleasantly acidulated with vinegar, lemon, or orange juice, &c. *gradually* returning to their *usual diet* as the appetite and strength increases. Admitting *tea*, or *any other article*, very warm into the stomach, *debilitates*, and of course is very injurious to health.



APPENDIX.

THE Medical Receipts, printed in the Appendix, which are taken from the *last* EDINBURGH, LONDON, and DUBLIN PHARMACOPŒIAS, are distinguished by the following abbreviations, placed immediately after each receipt:—

1. EDIN.....2. LOND.....3. DUB.

The directions for their Dose, &c. (where not accompanying the medicine) will be found by referring to the Compendium, under the head of the principal ingredient of each particular recipe.

To the other formulæ, the names of their authors will also be added, excepting those which are the productions of the author of this work.

The directions for *digesting, filtering, &c.* the wines and tinctures, and also the instructions for preparing other articles, will not be repeated after the *first prescription*, unless there are other modes of preparing them than the one already given.

WINES.

Wine of Tartrate of Antimony, formerly *Antimonial Wine*. Take of tartrate of antimony, (emetie tartar) twenty-four grains; Spanish white wine, one pound; mix them so that the tartrate of antimony may be dissolved. *Edin.*

Wine of Antimoniated Tartar, (emetie tartar.) Take of antimoniated tartar, ten grains; distilled water, boiling hot, half an ounce; Spanish white wine, two ounces: dissolve the antimoniated tartar in the water, and then add the wine. *Dub.*

Wine of Tartarized Antimony, (emetie tartar.) Take of tartarized antimony, two scruples; boiling distilled water, two ounces; Spanish white wine, eight ounces: dissolve as before. *Lond.*

Wine of Antimony. Take of vitrified (i. e. glass of) antimony, in powder, one ounce; Spanish white wine, twenty-four ounces: digest for twelve days, agitating them frequently, and strain through paper. *Lond.*

Wine of Iron. Take of iron filings, four ounces; Spanish white wine, four pints: digest for a month, often shaking the vessel, and then strain. *Lond.*

Ironated Wine, formerly *Chalybeate Wine*. Take of iron wire, cut in pieces, four ounces; white Rhenish wine, four pints; digest, &c. as above.

Rhubarb Wine. Take of rhubarb, sliced, two ounces; canella alba, or Winter's bark, one drachm; diluted alcohol, (proof spirit) two ounces; Spanish white wine, fifteen ounces: macerate for seven days, and strain through paper. *Edin.*

Wine of Rhubarb. Take of sliced rhubarb, two ounces and a half; lesser cardamom seeds, bruised and lusked, half an ounce; saffron, two drachms; Spanish white wine, two pints; proof spirit, half a pint: digest for ten days, and strain. *Lond.*

Wine of socotorine Aloes, commonly called *Sacred Tincture.* Take of socotorine aloes, one ounce; lesser cardamom seeds, ginger, each one drachm; Spanish white wine, two pounds: digest for seven days, stirring now and then, and afterwards strain. *Edin.*

Aloetic Wine. Take of socotorine aloes, four ounces; canella alba, two ounces; Spanish white wine, four pounds: powder the aloes and canella alba separately, then mix and pour on the wine; afterwards digest for fourteen days, frequently shaking the vessel; and lastly, filter the liquor. *Dub.*

Wine of Aloes. Take of socotorine aloes, eight ounces; canella alba, two ounces; Spanish white wine, six pints; proof spirit, two pints: prepare as above. *Lond.*

Dose, the same as the tincture of aloes.

Compound Wine of Gentian, commonly called *Bitter Wine.* Take of gentian root, half an ounce; Peruvian bark, one ounce; Seville orange peel, dried, two drachms; canella alba, one drachm; proof spirit, four ounces; Spanish white wine, two pounds and a half: first pour on the spirit, and after twenty-four hours add the wine; then macerate for three days, and strain. *Edin.*

This wine is mentioned as intended to supply the place of the former bitter stomach tinctures, and the once celebrated elixir of Van Helmont, and other unchemical and uncertain preparations, which had, formerly, a place in pharmacopœias.

Tobacco Wine.* Take of dried leaves of tobacco, one ounce; Spanish white wine, one pound: macerate for seven days, and then strain the liquor. *Edin.*

* Tobacco, according to Duncan, whether taken into the stomach in substance or solution, or into the lungs in the form of smoke, or applied to abraded surfaces, is capable of producing deleterious effects. It often proves virulently cathartic or emetic, and occasions intolerable cardialgia, anxiety, and vertigo.

The system becomes easily habituated to the action of tobacco; and many people use very large quantities of it in various ways as a luxury, without experiencing any other bad effects than what arises from their being unable to relinquish it after the habit is confirmed.

The active constituent of tobacco is an essential oil; for by long boiling, the decoction and extract of tobacco become almost inert; and by distillation, an oil is obtained from it, so active, that small animals are almost instantly killed, when wounded by a needle dipped in it.—As a medicine it is exhibited in various forms:—

1. In substance, when chewed it causes an increased flow of saliva, and sometimes relieves the tooth-ach; and, reduced to powder, it proves an excellent errhine when snuffed up the nostrils.

2. In infusion in water or wine; taken in such small doses as to have little effect on the stomach, it proves powerfully diuretic, and was employed by Dr. Fowler with very great success in cases of dropsy and dysuria. It is also applied externally for the cure of psora, tinea, and other cutaneous diseases.

3. In the form of smoke, it is injected into the anus, by means of bellows of a peculiar construction. By acting as a stimulus to the rectum, it sometimes succeeds in reviving the vital powers in some kinds of asphyxia, and in evacuating the intestines in cases of obstinate constipation.—See Fowler's *Medical Reports of the Effects of Tobacco*.

Hoffman observes that the smoke of tobacco received

TINCTURES.

Tincture of Assafætida. Take of assafætida, four ounces; alcohol, two pounds and a half: digest. *Edin.*

In the same manner and proportions the tincture of Russian castor is directed to be prepared; as also is the simple tincture of valerian; but to the latter tincture, proof spirit instead of alcohol is used: the volatile tincture of valerian is made with compound spirit of ammonia in the above proportions. The dose of each of these antispasmodic tinctures, is from twenty to an hundred drops.

Tincture of Socotorine Aloes. Take of socotorine aloes, in powder, half an ounce; extract of liquorice an ounce and a half; alcohol, four ounces; water, one pound: digest for seven days in a closed vessel, with a gentle heat, and frequent agitation. These directions are to be observed in preparing most tinctures. *Edin.*

Tincture of Aloes. Take of socotorine aloes, powdered, half an ounce; extract of liquorice, an ounce and a half;

by the anus, is of singular efficacy in obstinate constipations of the belly, to horses as well as the human species. He also says, he has known some of the common people who laboured under excruciating pains of the intestines, freed in an instant from all pain by swallowing the smoke; both the decoction and smoke have been injected with success in cases of incarcerated herniæ.—See Vol. II. of *The Edin. Medical Essays.*

The mode generally used by Dr. Fowler, for exhibiting tobacco internally, was a watery infusion of an ounce to a pint, given by drops, from six to an hundred, twice a day; but Duncan gives the *above formula* the preference to every other which has been proposed, because wine seems to extract more fully the active principles of the tobacco than either water or spirit taken separately.

distilled water, proof spirit, of each eight ounces, by measure; digest, &c. *Lond.*

The Dublin College uses the same proportion with the Edinburgh College, only in double quantity; but the extract of liquorice is directed to be softened in the water made boiling hot, which facilitates its solution. The London College orders the fluids by measure; and sixteen ounces by measure are only equal to fourteen ounces and a half by weight.

In this simple tincture, all the parts of the aloes are suspended in the menstruum. The liquorice serves both to promote the suspension, and to cover the taste of the aloes.

DOSE: about an ounce.

Tincture of Aloes with Myrrh. Take of myrrh, in powder, two ounces; alcohol, one pound and a half; water, half a pound: mix the alcohol with the water, then add the myrrh; digest for four days; and lastly, add socotorine aloes, one ounce and a half; saffron, an ounce; digest again for three days, and pour off the tincture from the sediment. *Edin.*

Compound Tincture of Aloes. Take of socotorine aloes, saffron, each three ounces; tincture of myrrh, two pints; digest. *Lond.*

This is supposed to be an improvement on the *elixir proprietatis*. These tinctures differ considerably in strength; the latter contains one part of aloes to eight of the menstruum; the former one to sixteen; while the simple tincture, already mentioned, contains but one to thirty-two. In prescriptions the proportions must be attended to. The myrrh and saffron may add to its stimulating properties.

Tincture of Aloes with Rhubarb. commonly called *Sacred Elixir.* Take of rhubarb, ten drachms; socotorine

aloes, six drachms; lesser cardamom seeds, half an ounce; proof spirit, two pounds and a half: digest. *Edin.*

Tincture of Rhubarb with Gentian, formerly called *Bitter Tincture of Rhubarb*. Take of rhubarb, two ounces; gentian root, cardamom seeds, each half an ounce; fresh dried orange peel, one ounce; proof-spirit, two pounds and a half: digest.

Tincture of Myrrh. Take of myrrh, in powder, three ounces; alcohol, twenty ounces; water ten ounces: digest. *Edin.*

Tincture of Cardamom. Take of lesser cardamom seeds, four ounces; proof-spirit, two pounds and a half: digest. *Edin.*

Or,

Take of lesser cardamom seeds, husked and bruised, three ounces; proof-spirit, two pints: (two pounds, *Dub.*) digest. *Lond.* and *Dub.*

Tincture of cardamoms has been in use for a considerable time. It is a pleasant warm cordial, and may be taken along with the mineral waters, or in any proper vehicle, in doses of a drachm to a spoonful or two.

Compound Tincture of Cardamoms. Take of lesser cardamom seeds, husked, caraway seeds, (cochineal, *Lond.*) each powdered, two drachms; cinnamon, bruised, half an ounce; raisins, stoned, four ounces; proof-spirit, two pints, (two pounds, *Dub.*) digest for fourteen days, and strain. *Lond.* and *Dub.*

This tincture, formerly called stomache tincture, contains so small a proportion of cardamoms as to be hardly entitled to derive its name from that article. The composition is sufficiently pleasant, but is altogether injudicious; for the large proportion of raisins used, forms only a very uneconomical and inelegant method of sweetening an aromatic tincture, and is somewhat similar

to the *Usquebaugh* of former dispensatories. It may be taken without any vehicle, to half an ounce, or an ounce; though more frequently used in draughts or mixtures.

Tincture of Rhubarb. Take of rhubarb, sliced, three ounces; lesser cardamom seeds, bruised, half an ounce; proof-spirit; two pounds and a half: digest. *Edin.*

Or,

Take of rhubarb, cut into pieces, two ounces; lesser cardamom seeds, bruised, half an ounce; (liquorice root, bruised, half an ounce, *Dub.*) saffron, two drachms; proof-spirit, two pints: digest. *Lond. and Dub.*

Compound Tincture of Rhubarb. Take of rhubarb, sliced, two ounces; liquorice root, bruised, half an ounce; ginger powdered, saffron, each two drachms; distilled water, a pint; proof-spirit of wine, twelve ounces by measure: digest for fourteen days, and strain. *Lond.*

Tincture of Rhubarb with Gentian, or the Bitter Tincture of Rhubarb. Take of rhubarb, sliced, two ounces; gentian root, sliced, half an ounce; diluted alcohol, two pounds and a half: digest for seven days, and strain through paper. *Edin.*

All the foregoing tinctures of rhubarb are designed as stomachics and corroborants, as well as purgatives.

For the tincture and other preparations of gentian, see page 119.

Tincture of Senna. Take of senna, one pound; caraway seeds, bruised, an ounce and a half; lesser cardamom seeds, bruised and husked, half an ounce; raisins, stoned, one pound; proof-spirit, one gallon: (nine pounds, *Dub.*) digest for fourteen days. *Lond. and Dub.*

Compound Tincture of Senna, usually called Elixir of Health, or Daffy's Elixir. Take of senna leaves, two ounces; jalap root, bruised, one ounce; coriander seeds,

bruised, half an ounce; proof-spirit, three pounds and a half: digest for seven days, and to the liquor, filtered through paper, add, double refined sugar, four ounces. *Edin.*

Or,

Take of the lesser cardamom, coriander, and sweet fennel seeds, each, bruised, half an ounce; jalap, in coarse powder, two ounces; senna leaves, eight ounces; proof-spirit, four pounds: digest in a close vessel, for seven days, frequently shaking them; then add, liquorice root, sliced, one ounce; raisins, stoned, eight ounces; continue the digestion for seven days more, after which, press out, and to the strained liquor, when the feces have subsided, add one ounce of spirit of nitrous ether, (i. e. dulcified spirit of nitre.)

For the dose, &c. of the three last articles, see page 15.

Tincture of Jalap. Take of jalap in coarse powder, three ounces, (eight ounces, *Lond.* five *Dub.*) proof-spirit, fifteen ounces: (two pints *Lond.* and *Dub.*) digest. *Edin.*

Compound Tincture of Savin. Take of extract of savin, one ounce; tincture of castor, one pint; tincture of myrrh, half a pint: digest till the extract of savin be dissolved, and then strain. *Lond.*

This is said to be a medicine of considerable importance in uterine obstructions, and hypochondriacal cases. The dose is from five drops to twenty or thirty, or more, in any suitable liquor.

For the other preparations from savin, see page 138; and for those from Russia castor, see page 161.

Tincture of Black Hellebore. Take of black hellebore; in coarse powder, four ounces; (cochineal, two scruples, *Lond.*) proof spirit, two pints, (two pounds, *Dub.*) digest. *Lond.* and *Dub.*

Dose: a tea-spoonful twice a day, in warm water, or

any other convenient vehicle. It is recommended as the best preparation of hellebore.

Tincture of Henbane. Take of the leaves of henbane, dried, one ounce; proof spirit, eight ounces: digest, &c. *Edin.*

This tincture, although not yet come into general use, is a valuable anodyne, and in many cases may be substituted with advantage for the tincture of opium, especially where the latter produces obstinate constipation, or, instead of its usual soporific and sedative effects, it causes uneasiness, restlessness, and universal irritation.

Tincture of Quassia. Take of shavings of quassia, one ounce; proof-spirit, two pints: digest. *Dub.*

Tincture of Galls. Take of galls, in powder, four ounces; proof spirit, two pints: digest. *Dub.*

This tincture is but lately introduced into practice; it is the most powerful of all the astringents.

An infusion or decoction of galls, says Dr. Duncan, may be used with advantage as an astringent gargle; and an ointment of one part of finely powdered galls, to eight of any simple ointment, is applied with success in hæmorrhoidal affections.

Tincture of Angustura. Take of angustura bark, in coarse powder, two ounces; proof spirit, two pints: digest. *Dub.*

Dose, &c. same as Peruvian bark.

For the manner of preparing the *essential salt*, both from this, the Peruvian, and other barks, see page 126; and for preparing the tinctures, &c. of bark, see page 32.

Tincture of Cascarilla. Take of the bark of cascarilla, powdered, four ounces; proof-spirit, two pints: digest. *Lond. and Dub.*

Dr. Duncan observes, that the proportion of spirit is here so large, (as indeed it is in most of the tinctures of this kind,) that it is merely to be considered as—a *concealed dram*!

For its other preparations, dose, &c. see page 37.

Tincture of Opium, or Thebaic Tincture, commonly called *Laudanum*. Take of opium, two ounces; proof spirit, two pounds: digest seven days, and filter through paper. *Edin. and Dub.*

The *London College* orders ten drachms of opium to a pint of proof spirit, and directs the digestion to continue for ten days.

Camphorated Tincture of Opium, or Paregoric Elixir. Take of hard purified opium, flowers of benzoin, of each one drachm; camphor, two scruples; essential oil of aniseed, one drachm; proof spirit, two pints; digest for ten days and strain. *Lond. and Dnb.*

This medicine was originally prescribed under the title of ‘*Asthmatic Elixir*,’ which it does not ill deserve.

Tincture of Galbanum. Take of galbanum, cut into pieces, two ounces; proof spirit, two pints: digest. *Lond.*

Tincture of Guaiacum. Take of gum guaiacum, one pound; alcohol, two pounds and a half; digest for ten days. *Edin.*

The volatile tincture of guaiacum is made by digesting four ounces of guaiacum in a pint and a half of the compound spirit of ammonia.

Tincture of Fox-glove. Take of the dried leaves of fox-glove, one ounce; proof spirits, eight ounces: digest. *Edin.*

Or,

Take of the leaves of fox-glove, (not large ones,) dried, and in powder, two ounces; proof spirit, one pint: digest. *Dnb.*

For Dr. Darwin's tincture, and other preparations of fox-glove, the dose, &c. see page 101.

Tincture of Musk. Take of musk, in powder, two drachms; rectified spirit of wine, one pint: digest. *Dub.*

Tincture of Squills. Take of squills, fresh dried, four ounces; proof spirit, two pints: digest. *Lond. and Dub.*

Tincture of Saffron. Take of English saffron, one ounce; proof spirit, fifteen ounces: (one pint, *Dub.*) digest. *Edin.*

Tincture of Ginger. Take of ginger, in coarse powder, two ounces; proof spirits, two pints: digest. *Lond. and Dub.*

For an account of various other preparations from ginger, see page 164.

Tincture of Camphor, commonly called *Spirits of Wine and Camphor*, or *Camphorated Spirits*. Take of camphor one ounce; alcohol, one pound: mix. &c. *Edin.*

It may also be made by dissolving a double, triple, &c. proportion of camphor in the alcohol.

TINCTURES MADE WITH ETHEREAL SPIRITS.

Ethereal Tincture of Aloes. Take of socotorine aloes, myrrh, of each, in powder, an ounce and a half; English saffron, one ounce; sulphuric ether with alcohol, (*i. e. spirit of vitriolic ether*, or *dulcified spirit of vitriol*,) a pound: digest the myrrh with the spirit for four days, in a close vessel; then add the saffron and aloes; digest again for four days; and when the fees have subsided, pour off the tincture. *Edin.*

This tincture agrees, generally, in its effects, with the

other tinctures of aloes; the only difference arising is from the more penetrating and stimulating nature of the menstruum itself.

Aromatic Sulphuric Ether with Alcohol, is made of the same aromatics, and in the same manner as the compound tincture of cinnamon, which is directed to be prepared in the formula for the *aromatic sulphuric acid*: see page 252, 253.

The aromatic sulphuric ether with alcohol, is designed for those whose stomachs are too weak to bear the acid elixir or tincture.

AMMONIATED, or VOLATILE TINCTURES.

Compound Camphor Liniment. Take of camphor, two ounces; water of pure ammonia, six ounces: spirit of lavender, a pint: mix the water with the spirit, and distil in a glass retort; then dissolve the camphor. *Lond.*

It is more penetrating than the camphorated spirits.

Compound Tincture of Castor. Take of Russia castor, in powder, one ounce; assafoetida, half an ounce; ammoniated alcohol, (i. e. simple spirit of ammonia, for the *compound* spirit of ammonia is the volatile spirit of sal volatile, see pages 74 and 75,) one pound: digest. *Edin.*

This medicine is highly recommended. See page 61.

Ammoniated Tincture of Cinchona, (i. e. *Peruvian Bark*.) This is not spoken of as a judicious preparation. For the recipe, &c. see page 32.

Ammoniated Tincture of Opium, or *Volatile Purgative Elixir*. Take of benzoic acid, (i. e. flowers of benzoin) English saffron, of each three drachms; opium, two drachms; essential oil of aniseed, half a drachm; ammoniated alcohol, sixteen ounces: digest. *Edin.*

This preparation is strongly recommended, (and in preference to the one given under the head tinctures,) in

spasmodic diseases, as chin-cough, &c; the ammonia removing the spasms immediately, while the opium tends to prevent their return. Each drachm contains about a grain of opium.

INFUSIONS AND DECOCTIONS.

REMARK. Decoctions differ from infusions only in the action of the menstruum being assisted by a boiling heat; decoctions can only be used with advantage for the extraction of principles which are neither volatilized nor altered by a boiling heat.

To promote the action of the menstruum, infusion sometimes precedes decoction.

Formerly it was supposed that the strength of a decoction, such as Peruvian bark, &c. was increased by continuing the boiling for a great length of time: but this is now known to be a mistake; because water, at different temperatures, is capable of dissolving only a determinate proportion of its active principles.

Compound Infusion of Mint. Take of the leaves of spearmint, dried, two drachms; boiling water, as much as will afford six ounces of the infusion, when filtered: digest for half an hour, in a covered vessel; strain the liquor when cold, and then add of double-refined sugar, two drachms; oil of spearmint, three drops, dissolved in half an ounce of compound tincture of cardamoms: mix.
Dub.

This infusion is slightly stimulating and diaphoretic, and forms a very agreeable diluent, which may be used in any quantity in diet, or as a vehicle for more active remedies.

Infusion of Rhubarb. Take of rhubarb, bruised, half an ounce; boiling water, eight ounces; spirit of cinnamon, an ounce: macerate the rhubarb in a close vessel with the water, for twelve hours; then add the spirit and strain the liquor. *Edin.*

For an account of its superiority over the tinctures, &c. as a purgative, see page, 12.

Infusion of Valerian. Take of valerian root, in coarse powder, two drachms; boiling water, seven ounces: digest for half an hour, and strain it when cold. *Dub.*

Valerian tea is an excellent antispasmodic, and frequently proves serviceable in hysterical cases, when the stomach will not bear the powder in substance.

Decoction of Iceland Moss, or Liverwort. Take of Iceland moss, half an ounce; water, a pint: digest for two hours in a close vessel; then boil for a quarter of an hour, and strain the liquor while hot. *Dub.*

For the preparation, &c. of an elegant hartshorn jelly, see page 77; and for other preparations of Iceland moss, see page 150.

Decoction for Fomentations. Take of the leaves of southernwood, the tops of sea-wormwood and chamomile flowers, of each, dried, one ounce; bay leaves, dried, half an ounce; distilled water, six pints: boil them a little, and strain. *Lond.*

The *anodyne fomentation* is thus prepared: take of white poppy heads, dried and bruised, two ounces; elder flowers an ounce; water, three pints: boil, &c.

Common Decoction, or Decoction of Chamomile. Take of Chamomile flowers, dried, one ounce; caraway seeds, bruised, half an ounce; water, five pints: boil for a quarter of an hour, and strain. *Edin.*

Compound Decoction of Chamomile. Take of chamomile flowers, dried, half an ounce; sweet fennel seeds, two drachms; water, a pint: boil a little, and strain. *Dub.*

Decoction for Clysters. Take of the leaves of mallows,

dried, one ounce; chamomile flowers, half an ounce; water, a pint: boil and strain. *Lond.*

For the decoction, &c. of marshmallows, see page. 153.

PILLS.

Aloetic Pills. Take aloes in powder, soap, equal parts; beat them, with simple syrup, into a mass fit for making pills. *Edin.*

Pills of Aloes and Ginger. Take of hepatic aloes, one ounce; ginger, in powder, a drachm; soap, half an ounce; essence of peppermint, half a drachm: mix, &c. *Dub.*

Compound Pills of Aloes. Take of socotorine aloes, powdered, one ounce; extract of gentian, half an ounce; oil of caraway seeds, two scruples; syrup of ginger, sufficient to make it into a proper mass for pills. *Lond.*

Either of the above preparations, (where aloes are proper,) will be found to operate more agreeably and effectually than the popular medicine called '*Anderson's Scotch Pills*;' which being generally prepared with the common aloes, are more stimulating or inflammatory in their operation.

For the dose, &c. of these preparations, and also for the different powders, &c. of aloes, &c. see pages 41—43.

Pills of Aloes with Colocyth. Take of socotorine aloes in powder, scammony, of each eight parts; coloeynth, (bitter apple) four parts; oil of cloves, sulphate of potass with sulphur, (formerly *sal polychrest*, or salt of many virtues,) of each one part: reduce the aloes and scammony into a powder, with the salt; then let the colocyth, beat into a very fine powder, and the oil, be added; lastly make it into a mass with mucilage of gum arabic. *Edin.*

The Dublin recipe uses Castile soap, scammony, and the *hepatic* instead of socotorine aloes. Both recipes are more powerful than the simpler aloetic pills.

Pills of Aloes and Assafœtida. Take of socotorine aloes, assafœtida, soap, equal parts: mix, &c. *Edin.*

Dose: about ten grains, twice a day.

They are very salutary in cases of dyspepsia, attended with flatulence and costiveness.

Pills of Aloes and Myrrh. Take of socotorine aloes, four parts; myrrh, two parts; saffron, one part: beat them into a mass with simple syrup. *Edin.*

Or,

Take of hepatic aloes, one ounce; myrrh, half an ounce; saffron, in powder, two drachms; essential oil of caraway, half a drachm; syrup a sufficient quantity: mix, &c. *Dub.*

The London formula differs only from the Edinburgh by using syrup of saffron instead of the simple syrup.

The virtues of this medicine may be easily understood from its ingredients. Given to the quantity of half a drachm or two scruples, it proves considerably cathartic; but it answers much better purposes in smaller doses, so as to operate only as a laxative, or alterative.

Compound Pills of Assafœtida. Take of assafœtida, galbanum, myrrh, each eight parts; (one ounce, *Dub.*) rectified oil of amber, one part: (half a drachm, *Dub.*) beat them into a mass with simple syrup. *Lond.* and *Dub.*

Compound Pills of Galbanum. Take of galbanum, opoponax, myrrh, sagapenum, of each an ounce; assafœtida, half an ounce; syrup of saffron, as much as is sufficient: beat them together.

This preparation was formerly called the *gum*, or *nervous pills*; they are intended for anti-hysterics and emmenagogues. *Lond.* See page 49.

Compound Pills of Rhubarb. Take of rhubarb, in powder, one ounce; socotorine aloes, six drachms; myrrh, half an ounce; volatile (essential) oil of pepperermint, half a drachm: make them, with syrup of orange-peel, into a mass. *Edin.*

Dose: a scruple or more.

Squill Pills. Take of fresh dried squills, powdered, one drachm; ginger powdered, soap, of each three drachms; ammoniacum, two drachms; syrup of ginger, sufficient to make them into a mass proper for pills. *Lond.*

Or,

Take of powder of squills, one drachm; ginger, in fine powder, two drachms; essential oil of aniseed, ten drops: triturate together, and form into a mass with jelly of soap. *Dub.*

Or,

Take of dried root of squills, in fine powder, one scruple; gum ammoniac, (ammoniacum,) lesser cardamom seeds in powder, extract of liquorice, each one drachm: form them into a mass with simple syrup. *Edin.*

Pills of opium. Take of hard purified opium, powdered, two drachms; extract of liquorice, one ounce: beat them until they are perfectly united. *Lond.*

Storax Pills. Take of purified storax, three drachms; soft purified opium, saffron, of each one drachm: beat them into an uniform mass. *Dub.*

Opiate, or Thebaic Pills. Take of opium, one part; extract of liquorice, seven parts; Jamaica pepper, two parts: soften the opium and extract separately with diluted alcohol; and, having beat them into a pulp, mix them; then add the pepper, reduced to a powder: and lastly, having beat them well together, form the whole into a mass. *Edin.*

It is unfortunate, says Dr. Duncan, that these compositions should differ so much in strength; the two former containing *two*, and the latter only *one* grain of opium, in ten of the mass. Under the idea that opium is to operate as a sedative, the addition of the pepper is somewhat injudicious.

For an account of opium and its preparations, see pages

51—59; and for the preparation, &c. of the compound pills of Calomel, see page 209: also for the mercurial or blue pills, &c. see pages 214—230.

POWDERS.

Dried Carbonate of Soda. Liquefy, over the fire, crystals of carbonate of soda, in a silver crucible, and then, increasing the heat, stir the liquefied salt, until, by the consumption of the water, it becomes dry: reduce it to a fine powder, and keep it in close vessels. *Dub.*

Carbonate of Soda, deprived of its water of crystallization, is recommended as an excellent remedy, for which we are indebted to Dr. Beddoes: he directs it to be prepared by simply exposing the pounded crystals before the fire, which, according to Duncan, is preferable to the above process, in which much of the carbonic acid may be expelled. By simple efflorescence, crystallized carbonate of soda loses more than half its weight, and falls into a fine powder. Whenever soda is prescribed in the form of pills, the effloresced carbonate is to be used; as, when made of the crystallized salt, they crack, and fall to pieces by the action of the air upon them.

MEDICAL USE. Dr. Beddoes first recommended the powder of effloresced soda, in calculous complaints, as a substitute for the super-carbonated alkaline waters, when these produced giddiness, or were too expensive; but its use has been extended much further; and it is found to be not only an excellent anti-acid, but seems almost to possess specific virtues in affections of the urinary organs. One or two scruples may be given in the course of the day, in the form of powder, or in pills, made up with soap and some aromatics.

The advertised *Soda Powder*, for *extemporaneously* preparing soda water, as has been already mentioned in the body of the Compendium, is perfectly inefficacious: and,

says Duncan, it may not be unnecessary to mention, that the place of the *Soda Water*, cannot be at all supplied by what is sold as *soda powder*, which is *not* a super-carbonate of soda. Indeed, he continues to observe, one moment's reflexion must shew the impossibility of reducing to a solid form; a *salt* which cannot exist in *solution*, except under very great pressure.

Powder of Yellow Bladder Wrack. Take of yellow bladder wrack, in fruit, any quantity, dry and clean it, then expose it to the fire in an iron pot or crueible, covered with a perforated lid, until, after the escape of the vapours, the mass becomes of a dull red, reduce the carbonaceous mass which remains, to very fine powder, and keep it in close vessels. *Dub.*

This charcoal was formerly known under the name of *Vegetable Ethiops*; it is analagous to the powder of burnt sponge.

ELECTUARY OF SENNA, OR LENITIVE ELECTUARY.

TAKE of senna, eight ounces; coriander seeds, four ounces; liquorice root, bruised, three ounces; figs, pulp of prunes, each one pound; pulp of tamarinds, half a pound; double-refined sugar, two pounds and a half; powder the senna with the coriander seeds, and sift out ten ounces of the mixed powder; boil the remainder, with the figs and liquorice, in four pounds of water to one half; dissolve the sugar in it, add this syrup by degrees, to the pulps; and, lastly, mix in the powder. *Edin.*

The London College directs the figs, prunes, and tamarinds, to be in equal proportions, and of each only *half a pound* to be used with the above quantities of the other ingredients. The Dublin employs one pound of prunes, two ounces of tamarinds, and entirely omits the figs; two

draehms of the essential oil of earaway, and a pint and a half of molasses, instead of sugar, are also added to the electuary.

SYRUPS.

Syrup of Ginger. Take of ginger root, bruised, three onnees; boiling water, four pounds; refined sugar, seven pounds and a half; macerate the root in the water in a close vessel for twenty-four hours; then to the strained liquor add the pounded sugar, so as to make a syrup. *Lond.*

Syrup of White Poppies. Take of dried white poppy heads, bruised, and freed from the seeds, two pounds; boiling water, thirty pounds; double-refined sugar, four pounds; macerate the heads in the water for twelve hours, then boil until only a third part of the liquor remains; after which strain by strong pressure, and put it away that the fees may subside, then boil the strained liquor to one half, and again strain, &c.; the sugar being then added, boil a little, so as to form a syrup. *Lond.*

Syrup of Opium. Take of extract of opium, forty-eight grains; boiling water, three pounds; macerate until the opium be dissolved, then add double-refined sugar, so as to make a syrup according to the general rules given. See page 160.

A syrup, now advertising under the appellation of '*Soothing Syrup*,' is, probably, a similar preparation to the above.

Opiate syrups and Godfrey's cordial, are often improperly used by mothers and nurses to their children.

Syrup of Violets. Take of fresh violets, one pound; boiling water, four pounds; double-refined sugar, seven pounds and a half; macerate the violets in the water for twenty-four hours in a glass or a glazed earthen vessel,

close covered; then strain without expression, add the sugar previously pounded, and make it into a syrup. *Edin.*

A spoonful or two proves to children gently laxative. It is apt to lose in keeping the elegant blue colour, for which it is chiefly valued; and hence some have been induced to counterfeit it. This abuse may be readily discovered, by adding to a little of the suspected syrup, any acid or alkaline liquor. If the syrup be genuine, the acid will change it red, and the alkali green; but if counterfeit, these changes will not happen. From this mutability of the colour of the violet, it forms an excellent test of the presence of acids and alkalies.

Syrup of Manna. Take of manna, double-refined sugar, each one pound; senna, half an ounce; boiling water, a pound; macerate the senna in the water, in a covered vessel, for twelve hours; then, with the strained liquor mix the manna and the sugar, so that they may be dissolved. *Dub.*

This syrup is a mild purgative, and well adapted to children and persons of a delicate constitution.

For an account of other syrups, see their different heads.

CLYSTERS.

Purging Clyster. Take of manna, an ounce; dissolve it in ten ounces of compound decoction of chamomile; then add of olive oil, one ounce; sulphate of magnesia, half an ounce: mix them. *Dub.*

The fetid clyster is made by adding to the former, two drachms of tincture of assafoetida. It is used in hysteric cases.

Vinegar, alone, or mixed with honey and salt, is recommended to counteract the effects of narcotic poisons, mercurial vapours, &c. see page 237.

For the use of oil clysters, see page 98.

Turpentine Clysters. Take Venice turpentine, half an ounce; rub it well together with the yolk of an egg, and two ounces of syrup of marshmallows; then gradually add ten ounces of the common decoction for clysters; lintseed oil, two ounces; and of the essential oils of aniseed and turpentine, each one drachm; coarse sugar, a spoonful: mix them for a clyster. *Quincy's Dispensatory.*

Or,

Take balsam of copaiva, two drachms, mix it by means of egg with the common decoction, in which has been previously dissolved half an ounce of soap: to this add lintseed oil, two ounces; oils of Juniper and aniseed, of each a drachm and a half: mix, &c. *Ibid.*

Or,

Take of common decoction, half a pint; Venice turpentine, (mixed with the yolk of egg,) half an ounce; lintseed oil, an ounce: mix for a clyster. *Lewis's Dis.*

Domestic Clyster. Take of cows milk, half a pint; brown sugar, olive oil, each one ounce: mix.

Common Clyster. Take of common decoction, twelve ounces; Epsom, Glauber's, or common salt, half an ounce; olive oil, two ounces: mix.

Emollient Clyster. Take of palm oil, an ounce and a half; cows milk, half a pound: let the oil be well mixed with the yolk of an egg, and then add the milk.

Starch Clyster. Take of jelly of starch, (see page 155,) four ounces; lintseed oil, half an ounce: liquefy the jelly over a gentle fire, and then mix in the oil.

Forty drops, or more, of laudanum, are sometimes added to the starch clyster.

Anodyne, or Opiate Clyster. Take of infusion of

lintseed, (see page 153,) six ounces; laudanum, forty drops: mix.

Or.

Take of mutton broth, five ounces; opium three grains: mix them.

Astringent Clyster. Take of lime water, ten ounces; japonic confection, (i. e. *compound electuary of catechu*, see page 182,) half an ounce: mix them together; of which mixture only one half is to be injected at a time.

Clyster against the cholic. Take of common decoction, half a pint; tincture of aloes, one ounce; common salt, a drachm: mix them together for a clyster.

All the above formulæ are from *Lewis's Dis.*

Purging Clyster. Take of Epsom or common salt, an ounce; chamomile tea, milk, or *thin* gruel, eight ounces; olive oil, two ounces: mix, &c.

Or

Take of mutton broth, twelve ounces; salt, one ounce: mix for a clyster.

REMARKS. The uses of these compositions are sufficiently obvious from their titles.

The starch, anodyne, emollient, and astringent clysters, are used in dysenteries, and other alvine fluxes, to strengthen the tone of the intestines, defend them from being corroded by the acrimonious humours, to heal their exulcerations, and ease the pains which accompany these disorders.

They therefore should be given in *small* quantities only, that they may remain some time in the bowels. The turpentine clysters are employed in nephritic cases, &c.; and are, as well as the emollient, purging, and vinegar clysters, to be injected in the quantities of ten or twelve ounces: but, in cases of poison, the clyster should be considerably increased; because it is meant to act as a fomentation to the stomach, and adjacent parts, besides emptying the bowels.

GARGLES.

Astringent Gargle. Take of oak bark, an ounce; alum, a drachm; honey of roses, an ounce; water, a pint and a half: boil the water with the bark, till such time as the liquor, when strained, will amount only to a pint; to which add the alum and honey.

Common Gargle. Take of tincture of roses, (i. e. *infusion of red rose-buds*, see page 121,) a pint; honey of roses, two ounces: mix.

Or,

Take of barley-water, six ounces; nitre, a drachm; honey of roses, an ounce: mix.

Where acids are requisite, forty drops of diluted sulphuric acid are to be added to this composition.

Detergent Gargle. Take of emollient decoction, a pint; tincture of myrrh, an ounce and a half: mix.

Emollient Gargle. Take of marshmallow root, two ounces; figs, four in number; water, three pints: boil them till one pint is wasted, and then strain the liquor.
Lewis's Dis.

REMARK. These liquors are used for washing the mouth and fauces: the first, where the parts are extremely relaxed; the second and third, where they require to be deterged, or the excretion of thick viscid saliva promoted; and the last, where the mouth is dry, parched, and rigid, to moisten and soften it. In some cases, volatile spirits may be advantageously joined to these kinds of preparations.

Dr. Pringle says, that in the inflammatory quinsy, or strangulation of the fauces, he has observed little benefit arising from the common gargles; that such as were of an

acid nature, appeared to do more harm than good, by contracting the emunctuaries of the saliva and mucus, and thickening those humours; that a decoction of figs in milk and water, seemed to have a contrary effect, especially if some spirit of ammonia was added, by which the saliva was made thinner, and the glands brought to secrete more freely; a circumstance always conducive to the cure.

CATAPLASMS AND SINAPISMS.

Cataplasm of Cummin. Take of cummin seeds, half a pound; bay berries, dry leaves of water germander or seordium, virginian snake root, of each three ounces; cloves, an ounce; reduce them altogether to powder; and, with the addition of three times their weight of honey, make a cataplasm. *Edin.*

The cataplasm of cummin, as is observed by Duncan, was intended for a reformation of the *London treacle*, (a medicine so called,) which for some time past, has been scarcely otherwise employed than as a warm cataplasm or poultice.

For the preparation of the mustard sinapism or cataplasm, see page 132; and for the alum curd, or cataplasm for the eyes; see page 185.

For *collyriums* or lotions for the eyes, see pages 185, and 201; and for some excellent practical remarks and rules relative to the treatment and preservation of the eyes; see *Willich*.

For a *Styptic* or liquor for restraining hæmorrhagies, see page 205.

An Opiate for the Teeth. Take oil of hen-bane, one drachm; opium, in powder, half a drachm; extract of deadly nightshade, camphor, of each six grains; oil of

cajepunt, tincture of cantharides, of each eight drops; mix, &c.

Dr. Handel, of Mentz, recommended the above medicine as a very powerful *sedative* in tooth ache, occasioned by corrupted or hollow teeth; upon the application of which, he observes, the excruciating pains almost instantly cease.

Hen-bane is spoken of for the tooth-ache, &c. by Celsus: see page 107.

POMADE DIVINE.

TAKE of beef marrow, twelve ounces; steeped in water (occasionally changing it) ten days, and afterwards in rose-water, twenty-four hours; flowers of benzoin or benjamin, storax, and florentine orris root in powder, of each half an ounce; these ingredients are to be put into an earthen vessel, closely covered down, to keep in the fumes, and being suspended in water, are made to boil three hours, after which the whole is to be strained and put in bottles while warm. *Dr. Beddoes.*

CREAM OF LEAD

Is made by mixing from one to three tea-spoonsful of extract of lead, with a small tea-cupful of fresh cream or milk. It is a very useful and pleasant application. If a person is scalded, and the cream of lead instantly applied, the part will be rendered insensible to irritation, and little or no inflammation follows. If the eye is inflamed, a drop of laudanum put into it every night, with the application of a little of the lead cream externally, will often subdue the disease. Cream of lead will be found generally useful to abate inflammation, and may therefore be applied over fresh wounds, &c. spread thick upon linen cloth. It possesses, among other advantages over

lotions or embrocations, that of not requiring so frequent a renewal of the application.

TREATMENT OF CORNS.

CORNS are justly attributed to wearing too straight or narrow toed shoes, which never fail to produce these tubercles, especially if the person is obliged to stand or walk much, and in the summer time.

Directions for their Cure. First soften the corn, by soaking it in warm water, to which a handful of salt and oatmeal should be added, after which, the upper and harder parts are to be cautiously pared off, and, as the case may require, one of the following applications made use of, viz. house-leek, gold-beater's skin, simple dyachylon, dyachylon with the gum, soap plaster; or a plaster composed of white dyachylon, camphor, galbanum soap, and small quantities of verdegris, and opium, in fine powder.

The pulp of lemon, used at bed-time to the corn, is said to soften, and thus renders it more easily extracted the following morning. Others recommend the leaf of the ivy-tree, first steeped twenty-four hours in strong vinegar. The smooth side of the leaf is to be applied to the corn.

When the knife is employed to eradicate corns, the greatest care becomes requisite, lest by unskilful management, dangerous wounds on the tendons may be inflicted; which, as corns are mostly situated on joints of the toes, may very easily happen.

BLISTERS

ARE used both in acute and chronic diseases; and employed as a general or particular stimulus for raising the

pulse, and quickening the circulation in low fevers, and in lethargic disorders; or, for resolving topical obstructions.

Fixed pains, whether external or internal, as in the rheumatism, hip-gout, dysentery, pleurisy, or bastard-pleurisy, are frequently observed to yield to a blister on the part.

Blisters are likewise applied to the head in epileptic and maniacal disorders, inveterate and periodic head-achs, and obstinate defluxions on the eyes.

The method of evacuation by blisters has this to recommend it above all others, it may be safely used at all times.

Many fevers are cured by evacuations alone, without the use of any other means; but scarce any of the more violent kind can be removed, without such evacuations as are procured by blisters.

The effects of other evacuations are, in violent disorders so precarious and uncertain, that it is dangerous to attempt them, as is often experienced in bleeding; yet, timid patients are more afraid of a blister than bleeding, although the latter is attended with more danger.

The *extract* of cantharides or Spanish flies, is, in many respects, preferable to the fly in substance, particularly for the dressing of perpetual blisters: it will act more uniformly than those compositions which contain the fly in substance, besides the advantage of giving *little pain* when applied.

But, for general use, or in those cases where a blister is most commonly used; namely, to draw (*as speedily as possible*) inflammation, &c. from the cavities or deep seated parts of the body, and to alleviate those pains which are deeply situated, or for complaints of such a nature, will not a blister, when the action is the quickest and most potent, be most *serviceable*, although attended with greater *pain*? Indeed, that pain which a blister excites by its action on the skin, is, I conceive, absolutely necessary and essential to the purposes for which blisters

are in these cases applied, namely, for the revulsion of humours from the internal to the external parts of the body; it being an axiom in nature, that the lesser inflammation must submit to the greater; therefore a painful blister being applied to the skin, (a part most acutely sensible to pain,) by its action there, frequently diverts the internal inflammation and humours, and subdues the disease.

Blisters must be spread with a cool spatula.

LEECHES

SHOULD be collected in summer, in waters having a clear sandy bottom, as the bite of those found in stagnant waters, and marshes is said to cause pain and inflammation. For the same reason, the horse leech, which is entirely brown, or only marked with a marginal yellow line, is commonly rejected, although they are used frequently in the north of Europe, and during the late scarcity of leeches have occasionally been employed, without any bad consequences, in this country. The vulgar story of their drawing the whole blood out of the body, by evacuating it at one end as fast as they sucked it in at the other, if true, would give them a superiority over the others, as when a sufficient quantity of blood was drawn, there could be no difficulty in making them quit, even without passing a ligature round their necks.

Leeches are best preserved for use in a bottle half filled with pure water, and covered with gauze or muslin, although they are said not to die even in an exhausted receiver, nor in a vessel filled with oil. It is advisable frequently to change the water in which they are kept, although there are instances of their being many months, and even years in the same water; and it is remarkable, that water in which they are, keeps much longer sweet than by itself. It is scarcely necessary to observe, that whenever the water becomes turbid, or foul, or gets an un-

pleasant smell, or any of the leeches die in it, it should be changed. They should always be kept in a moderate temperature, about 50° Fahr. Some recommend throwing a little bran into the water; but it is so well ascertained that they will live many years without any such addition, that it is better not to attempt to feed them, until we are better acquainted with their natural food. Though apparently so hardy, leeches are sometimes subject to great mortality from unknown causes, as in 1798 and 1799. Infection, in some cases, seems evident. To avoid danger from this source, they should be kept rather in several small vessels, than in one large reservoir; and when fresh leeches are procured, they should always be kept by themselves, and their health ascertained, before they are added to the general stock. When they have gorged themselves with blood, they frequently die of indigestion, and cause a great mortality even among those which have not been used. To avoid this danger, leeches which have recently sucked, should also be kept by themselves, until they have recovered their usual vigour. The treatment of the individuals which have performed their office, has been the subject of much controversy. One recommends using no means to make them disgorge the blood they have sucked, but only to immerse them for half an hour in milk-warm water, and to change their water regularly every second day for some time; others advise stripping them, as it is called, that is, taking hold of the tail between the finger and thumb of the left hand, and drawing the animal through those of the right, so as to evacuate the blood; while others again apply salt to their heads until they vomit all the blood they have sucked. Leeches change their skin frequently. At that time they are subject to indisposition, and will not bite. The removal of the old cuticle may sometimes be assisted by wiping them with a bit of soft linen.

Medical use. Leeches are a very old and useful remedy in every case requiring local blood-letting. They cause

less irritation than cupping, and can often be applied nearer to the part.

They are used,

1. In inflammation of all kinds, viz. inflammation of the eyes, plirenzy, sore throat, rheumatism, tooth-ache, and the gout.

2. In some cases of the measles, and scarlet fever.

3. In suppressed natural or habitual hæmorrhagies, especially piles.

4. In plethora of the head, chineough, in mania from suppressed discharges.

5. In cases of difficulty and pain in discharging the urine, when attended with violent inflammation.

The application of leeches is sometimes attended with difficulty. When changing their skin they will not bite, and are averse to it in cloudy weather, and in the evening. When kept out of the water some minutes before they are applied, and allowed to crawl on dry linen, they are said to bite more eagerly. The part to which they are to be applied should be very well washed, first with soap and water, and afterwards with water, or milk and water, and if covered with strong hairs, should be shaved. When they are not inclined to bite, the part may be moistened with milk, or a little blood drawn from it by a scratch with a lancet. When they fix, they inflict, without causing much pain, a wound of three minute flaps, meeting at equal angles, from which they suck blood until they are gorged, and drop off spontaneously, or are forced to quit their hold by sprinkling on them a little salt. A large leech will draw about an ounce of blood; but the quantity may be much increased by bathing the wounds with tepid water, or applying over them cupping glasses. Sometimes it is more difficult to stop the bleeding; but it will always cease on applying a little lint, and continuing pressure a sufficient time. *Edin.*

The leech when fixed, should be watched, lest it should find its way into the anus when used for the hæmorrhoids,

or penetrate into the œsophagus if employed to draw the gums, as it would make great havoc in the stomach or intestines. In such a case, the best and quickest remedy is to swallow some salt; which is the method practised to make it loose its hold when it sucks longer than was intended. Salt of tartar, volatile alkali, pepper, and acids, make it also leave the part on which it was applied.

Cows and horses have been known to receive them into the throat in drinking. The usual remedy is to force down some salt, which makes them fall off.

The discharge occasioned by the puncture of a leech is usually of more service than the process itself. When too abundant it is easily stopped with brandy, vinegar, or other styptics, or with a compress of dry linen rag bound strongly on the bleeding orifice.

OBSERVATIONS ON THE ABUSE OF MEDICINE.

If it be true, as has been asserted, that the most valuable medicines are procured from poisons, it must be observed that it is their proper or improper use that constitutes the remedy or the poison.

Strong emetics and drastic purges, by frequent use, greatly injure the stomach and bowels, impair digestion, and render the habit of body costive.

Persons of tender bowels, or weak nerves, suffer much from the violent agitation of emetics, which invert the natural expulsive motion of the intestinal canal, and occasion bile to flow into the stomach, contrary to its natural course, attended with nausea, &c.

To those who are of full habit of body, or who have unsound viscera tending to inflammation, emetics sometimes prove fatal, by increasing the inflammation, or bursting a blood vessel.

In most cases, to assist nature may be proper, by encouraging those discharges which she may produce, yet every discharge is not critical or salutary, but on the contrary often morbid and spasmodic.

Wherever symptoms of bile appear, the too general practice is to take an emetic, not duly considering the cause of its redundancy; which, for the most part, is symptomatic, and not a primary affection; for where bilious vomiting presents itself, as in cases of nephritic colic, inflammation of the stomach, plethoric disorders of the head, or a disposition to apoplexy, which not unfrequently happen, emetics will aggravate the disease, and render it more dangerous, or even mortal. In such cases, bleeding, drinking plentifully of any weak liquid, and the warm bath, with cooling laxative medicines, (such as the Cheltenham waters*) to carry off the bile by the intestines, are proper.

By drastic purgatives, often repeated, the intestines are robbed of their mucus, and rendered tender, irritable, and subject to diarrhoea, and colic pains; especially after taking cold, errors in diet, or other accidental causes; which had it not been for those strong purging medicines, probably would not have happened: and by the continued use of such medicines, the body is deprived of its nourishment, and the blood is much impoverished.

Purgatives as well as spirituous liquors, too freely used, injure the fine nervous coats of the stomach and bowels, and by degrees render them insensible to the gentle stimulus of the bile, or the purgative appointed by nature. Therefore, costiveness will be another bad consequence resulting from the frequent use of such medicines; which,

* The author feels that he cannot speak too highly of this water, which has proved most efficacious in various complaints, and particularly in the cases above alluded to.

like opium, or spirituous liquors, are made use of more from *habit* than *real necessity*.

Medicines prepared with aloes, will, by a too liberal use, produce the piles, and in many instances, fistulas, &c. have been the consequence.

All stimulating medicines act as sedatives, i. e. they diminish the vital power of the body, when their first effect is over; as appears evident in opium, and spirituous liquors. Stimulants, when applied to the skin, as in blisters with cantharides, produce a similar change, and have been observed to procure sleep, when other means proved ineffectual.

Instructions for the recovery of persons *Apparently Drowned*, or for *Suspended Animation*, from any other cause; also those for the *Treatment of Poisons*; and the practice of *Venesection*, &c. will appear in the Appendix to the second or concluding part of this COMPENDIUM.

TABLE

OF THE

GRADATIONS IN DOSES OF MEDICINE.

SUPPOSE that the proper dose of the medicine to be given is *one drachm*;—

For a person from 14 to 21 years, it will be two-thirds or two scruples.

For a person from 7 to 14 years, it will be one half or half a drachm.

For a person from 4 to 7 years, it will be one third or a scruple.

For a person of 4 years, it will be one-fourth or fifteen grains.

For a person of 3 years, it will be one-sixth or half a scruple.

For a person of 2 years, it will be one-eighth or eight grains.

For a person of 1 year, it will be one-twelfth or five grains.

REMARK. In administering medicine, due allowance should be made for differences in strength of constitution, &c: and, in most instances, it is prudent to begin with the small dose, increasing the quantity by degrees, until it produces the desired effect.

Denominations of Apothecaries' Weights, and English Wine Measures.

| | | | | |
|-----------|---|----------|---|-----------------|
| A pound | } | contains | } | twelve ounces. |
| An ounce | | | | eight drachms. |
| A drachm | | | | three scruples. |
| A scruple | | | | twenty grains. |

| | | | | |
|----------|---|----------|---|-----------------|
| A gallon | } | contains | } | eight pints. |
| A pint | | | | sixteen ounces. |
| An ounce | | | | eight drachms. |

A table or large spoon, contains half an ounce of wine, tinctures, infusions, or decoctions, &c.

A dessert spoon is half a table spoonful.

A tea spoon, (i. e. sixty drops, or a drachm,) is half a dessert spoonful.

It has been justly observed, that the want of uniformity in weights and measures is attended with many inconveniencies. In this country druggists and grocers sell by *avoirdupois* weight; and the apothecaries are directed to sell by *troy* weight; although, in fact, they seldom use the *troy* weight for more than two drachms.

The practice of administering active fluids by drops, has been long known to be inaccurate; but the extent of the evil has not till lately been ascertained. Not only the drops of different fluids from the same vessel, and of the same fluids from different vessels, vary much in size; but the drops of the same fluid differ, even to the extent of a *third*, when dropt from different parts of the lip of the same vessel. It is therefore advisable to abolish the custom of dropping active fluids; and as weighing is too troublesome and difficult for general use, Lane's drop measures are recommended.

Accurate graduating measures, from *half a drachm* up to *eight ounces*, together with Mr. Lane's drop measures, are sold at the ELABORATORY, GLOCESTER.

Description of an Ounce Graduated Measure.

| | | |
|-----------------|-----------------|---|
| $\frac{3}{4}$ * | $\frac{5}{8}$ * | |
| 1— | — | is one ounce or eight drachms. |
| | 7 | —seven drachms. |
| | 6 | —six ditto or three-fourths of an ounce. |
| | 5 | —five drachms. |
| $\frac{1}{2}$ — | — | —four ditto or half an ounce. |
| | 3 | —three drachms. |
| | 2 | —two ditto or one-fourth of an ounce. |
| | 1 | —one drachm or the eighth part of an ounce. |
| | — | —half a drachm or thirty drops. |

* * Among the *modern* medical improvements, it would, perhaps, have been of service to the community to have abolished from medicine *these ancient characters*, and to have written the quantities meant by them, either in words at length, or by contractions *easily understood*: for, it is possible, an inexperienced person may mistake one character for another; and that even those of the greatest experience, may, sometimes, in the hurry of business, or from some other cause, put one for another; or write them *so nearly alike*, that the real meaning being left to conjecture, considerable mischief may ensue.

CHARACTERS

USED IN

PHARMACY & MEDICINE.

℞ recipe.

℥, ℥℥, or ana, of each a like quantity.

℔ a pound, or a pint.

℥ an ounce.

ʒ a drachm.

℥ a scruple.

gr. grains.

g^{tt}. drops.

Haustus, a draught.

H. S. hora somni, or at bed-time.

℔ or ss. half of any thing.

cong. congius, a gallon.

coch. cochleare, a spoonful.

cras mane, to-morrow morning.

Mist. mistura, a mixture ; f. mist. means,
let it be made into a mixture.

M. manipulus, a handful.

P. pugillus, a pugil, or eighth part of a
handful.

P. Æ. equal quantities, or parts.

Primo mane, early in the morning.

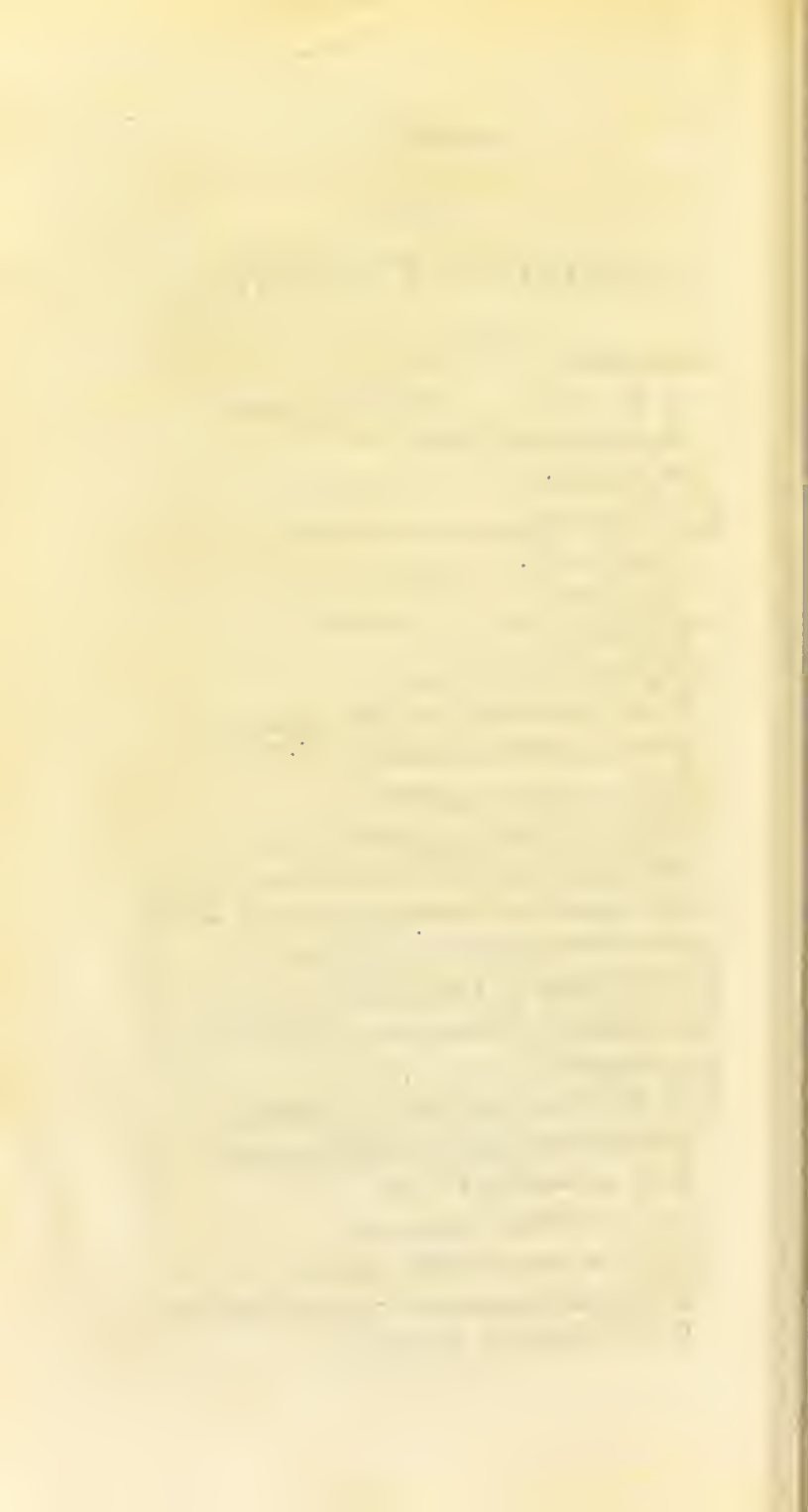
S. A. according to art.

q. s. a sufficient quantity.

q. pl. as much as you please.

P. P. pulvis patrum, or the jesuit's bark.

Z. Z. Zingiber, or ginger.



GLOSSARY,

OR

EXPLANATION OF TERMS

IN THE

DIFFERENT BRANCHES OF MEDICINE.

†† No words are introduced that can give offence.

ABDOMEN. The belly.

ABORTION. A miscarriage.

ABSORBENTS. Medicines are so termed, which have no acrimony in themselves, and destroy acidities in the stomach and bowels; such are, calcined magnesia, prepared chalk, oyster shells, &c.

ABSTERGENTS. Medicines which were formerly supposed to purify or cleanse the blood.

ABSORBENT VESSELS. A system of small, delicate, transparent vessels, that absorb and convey a fluid to the thoracic duct, which is their termination. They are divided into lacteals and lymphatics.—See lacteals and lymphatics.

ABSORPTION. To suck up. Thus the nutritious part of the food is imbibed, sucked up, or absorbed from the intestinal canal by the lacteals; thus mercury is taken into the system by the lymphatics of the skin, &c.

ACETATES. Salts formed by the union of the acetic or strong acetous acid, (formerly radical vinegar,) with different bases.

ACETIC or *strong* **ACETOUS ACID**, is obtained by exposing vinegar to frost, &c.—See the body of Compendium, p. 168.

ACETITES. Salts formed by the union of the acetous acid or distilled vinegar, with different bases.

ACETOUS ACID. Impure or common vinegar.

ACETOUS FERMENTATION. See fermentation.

ACID. Acids are now defined to be salts of a sour taste: acids, according to the kingdom of nature in which they are found, are divided into mineral, vegetable, and animal. The various acids employed medicinally, are the acetic, acetous, benzoic, carbonic, citric, nitrous, and sulphuric or vitriolic.

ACID, AERIAL, or FIXED AIR. See carbonic acid gas.

ACONITE. Wolfsbane, or monkshood; a poisonous plant, but sometimes usefully employed in medicine. Linnæus, says, that it is fatal to swine and goats, but does no injury

to horses, which eat it when dry. A decoction of the roots has been used to *kill bugs*, and the powder, disguised in bread, &c. will poison rats. The huntsmen on the Alps, who hunt the wolves, &c. dip their arrows into the juice of this plant, whence it is named *wolfsbane*.

ACOUSTICS. Medicines used to restore hearing.

ALEXIPHARMICS. See diaphoretics; they were formerly given with a view to counteract poisons.

ALKALI. So named from the plant kali, from which the fixed mineral alkali, natron, or soda, is obtained: there are three sorts of alkalies, viz. the vegetable alkali, potass, or potash; soda; and ammonia; or volatile alkali; the two first are called fixed alkalies.

ALKALI, Caustic. Alkalies are so called when deprived of the carbonic acid they contain, for they then become more caustic and violent in their action.

ALMONDS OF THE EARS. The tonsils are vulgarly so called from their situation and resemblance.

ALUMIN, (alumina) is a term in M. Fourcroy's Elements of Natural History and Chemistry, for the earth of alum, base of alum, or pure clay. It is manufactured into porcelain and glass; it is one of the five proper earths.

ALTERATIVES. Medicines which re-establish the healthy functions of the animal economy, without producing any sensible evacuation.

AMENORRHŒA. A certain obstruction to which females are incident.

ANALEPTICS. Those substances used for food and medicine which are calculated to restore strength when impaired by sickness.

ANASARCA. Dropsy of the cellular membrane.

ANEURISM. A preternatural dilatation of an artery.

ANGINA. A sore throat. See Cynanche.

ANGINA PECTORIS. An extremely dangerous disease, which seizes those who are subject to it when walking, with a very painful sensation in the breast, threatening immediate suffocation, and often inducing syncope.

ANODYNES, NARCOTICS, HYPNOTICS, or OPIATES. Those medicines are so termed which procure ease from pain, or induce sleep.

ANOMALOUS, is a term often applied to those diseases whose symptoms do not appear with that regularity generally observed in diseases: it is also used when the symptoms are so varied as not to bring it under the description of any known affection.

ANOREXIA. A want of appetite, without loathing of food.

ANOSMIA. A loss of the sense of smelling.

ANTACIDS, or ANTIACIDS. Those medicines that have

the power of destroying acidity in the stomach and intestines.

ANTHELMINTICS, or (according to Dr. Johnson, **ARBUTHNOT**, &c.) **ANTHELMINTHICS**. Medicines which procure the removal of worms from the human stomach and intestines.

ANTI. Against. There are many names compounded with this word, as *antiasthmatics*, *antihysterics*, *antiscorbutics*, *antispasmodics*, &c. remedies against these complaints.

ANTISEPTICS. Those medicines which possess a power of preventing animal substances from passing into a state of putrefaction, and of obviating it when already begun. This class of medicine comprehends four orders, 1. *Tonic antiseptics*, as the *Angustura* and *Peruvian barks*, *chamomile*, &c. which are suited for every condition of body, and are, in general, preferable for relaxed habits, to other antiseptics. 2. *Refrigerating antiseptics*, as *acids* and *neutral salts*; principally adapted for the young, vigorous, and plethoric. 3. *Stimulating antiseptics*, as *wine* and *alkohol*; best adapted for the old and debilitated. 4. *Antispasmodic antiseptics*, as *assafœtida*, *camphor*, &c. which are to be selected for irritable and hysterical habits.

ANUS. The fundament.

APERIENTS. Gentle laxatives, or opening medicines.

APEX. The extremity of a part.

APHONIA. A suppression of the voice, without either syncope or coma.

APHTHÆ. The thrush: a disease to which children are very subject.

APOCENOSIS. A superabundant flux of blood, or other fluid without fever.

APOPLEXIA. Apoplexy.

APOZEM. A decoction.

APYREXIA. The intermission of feverish heat.

AQUA. Water. A composition of hydrogen and oxygen.
See *Water*.

AQUÆ MINERALES. See *Waters*, mineral.

AQUEOUS HUMOUR OF THE EYE. The very limpid watery fluid which fills both chambers of the eye.

ARGILLACEOUS EARTH. See *alumin*.

AROMATICS. Medicines which have a grateful spicy scent, and an agreeable pungent taste.

ARTHRITIS. The gout.

ASCARIS. The thread or maw-worm: they inhabit the rectum.

ASCARIS lumbricoides. The long and round worm.

ASPERA ARTERIA. The trachea was formerly so called.

ASPHYXIA, (a pulse.) That state of the body, during life, in which the pulsation of the heart and arteries cannot be perceived.

ASTHMA. (To breathe with difficulty.) There are three species of asthma.

ATAXIA. Want of regularity in the symptoms of a disease, or of the functions of an animal body.

ATMOSPHERE. The gaseous, or aëriform fluid, which everywhere invests the surface of the globe.

ATONIC. Relaxed, diminution of strength, weakness, debility.

ATONY. A defect of muscular power.

ATROPHY. Emaciation and weakness, but without hectic fever.

ATTENUANTS. See diluents.

AXILLA. The arm-pit.

AXUNCIA. Hog's-lard

AZOTE, or **NITROGEN**. In chemistry, a gas that forms the unrespirable part of the atmospheric air. It exists in the proportion of about 78 per cent. by bulk, or 74 per cent. in weight. It is fatal to animals, hence its name azote, or the extinguisher of life. This gas is obtained by mixing together iron filings and sulphur, with a little water. Azote is a constituent part of all animal bodies: it is the cause of putrefaction or the production of ammonia; and in certain proportions with oxygen, forms the nitric acid. Azote in its different stages of oxydation becomes nitrous oxide, nitrous gas, as well as nitric acid. It converts very delicate vegetable blues to green. Its principle effect on the chemical properties of the atmosphere is thought to be the dilution of the oxygen gas, which in its pure state would be more active than is consistent with the economy of nature.

BASTARD PLEURISY. Rheumatism of the muscles of the side.

BELLADONNA, [from *bella donna*, handsome lady; it is so called, because the ladies of Italy used it to take away the too florid colour of their faces,] or **DEADLY NIGHTSHADE**.

A strong poison of the narcotic kind; the berries have furnished many instances of their fatal effects, particularly upon children, that have been tempted to eat them.

BILE. A bitter yellowish fluid, secreted in the glandular substance of the liver.

BILIOUS. A term very generally used to express diseases arising from too copious a secretion of bile.

BLOODY FLUX. See dysentery.

BOLUS. A form of medicine exceeding a pill in size, and yet not too large to be swallowed: they should be made up of a softer consistence than pills.

BORACIC ACID. Acid of borax.

BORAX. A neutral salt, formed by the combination of the acid improperly named *sedative salt*, with the marine alkali.

BOTANY. The science of plants; that part of Natural History which relates to vegetables.

CACHEXIA, or CACHEXY. A bad, or diseased habit of body, without fever, and independent of any other complaint.

CALCAREOUS EARTH, CALX, or LIME. See lime.

CALCINATION, or OXYDATION. A term given by chemists to that process, by which minerals, when exposed to a certain degree of heat, are deprived of their water; stones converted into lime; and metals into calces or oxyds: the metal thus calcined or burnt, is termed a metallic calx or oxyd.

CALORIC. Heat, or the matter of heat.

CALLOSITY. A term applied by surgeons to a hardened part.

CANCER. A painful, hard, indolent tumour of a glandular part, which terminates in the foulest ulcer.

CARBONATE. Is a generic term for the combination of the carbonic acid with earths, alkalies, and metallic oxides. Carbonates always preserve their alkaline properties in some slight degree.

CARBON. Pure charcoal, destitute of the saline and metallic matter usually mixed with it.—Nicholson observes, it is possible to obtain it perfectly pure. It exists in a large quantity as a component part of vegetable substances; it enters into the composition of animal matter, and is contained in substances belonging to the mineral kingdom. The diamond is now considered carbon, or charcoal crystallised; in the combustion of which with oxygen gas, Lavoisier has found it to be an acid precisely the same with that which is produced by the burning of charcoal, or what is termed the *carbonic acid*.

CARBONACEOUS ACID, or CARBONIC ACID. A gaseous product of the full saturation of carbon with oxygen.

CARBONIC ACID GAS. This is the first of the elastic fluids that appears to have been distinguished from common air, though its nature was not properly understood till it was investigated by Dr. Black. Its deadly properties as it is met with in subterraneous cavities, particularly the celebrated Grotto del Cano near Naples, occasioned it to be distinguished by the name of *spiritus lethalis*. Van Helmont first gave the name of gas, from a German word equivalent to our spirit, to this vapour produced from burning charcoal. He likewise called it *spiritus sylvestris*, and

when arising from fermented liquors spiritus vinosus. From its existing in the inelastic state, in water, it was called fixed air; a name which Black and others long retained. Bewley termed it mephitic air, from its great abundance in nature combined with lime in the form of chalk, and it has been named the cretaceous and the calcareous acid, subsequent to the discovery of its acid nature. But carbonic acid has superseded all those, since it appears to have been ascertained, that its radical is carbon. Of this, or rather of charcoal, according to the experiments of Lavoisier, it contains twenty-eight parts by weight, to seventy-two of oxygen. Guyton Morveau considers it as composed of 17.88 pure carbon, and 82.12 of oxygen.

CARBONATES of LIME. See testaceous powders.

CARBONATE of MAGNESIA. Aërated or common magnesia with its fixed air, while calcined or deaërated magnesia is that which is deprived of fixed air.

CARBONATE of POTASS, or POTASH; is the prepared vegetable alkali, (salt of tartar, &c.) saturated with carbonic acid or fixed air.

CARBONATE of SODA. Is prepared natron, or mineral alkali; it answers, in most cases, the same purposes in medicine as the vegetable alkali, and is far more agreeable to the stomach. Carbonates then are salts formed by the union of the carbonic acid with different bases: thus there are carbonates of alum, of ammonia, &c.

CRETACEOUS ACID, (or the acid from chalk, marble dust, &c.) Fixed or fixable air; mephitic gas or vapour; or aërial acid.

CARDIACS. See Cordials.

CARDIALGIA.—See heart-burn.

CARIES. Rottness or ulceration of the bones.

CARMINATIVES, are those medicines which allay pain and dispel flatulencies of the primæ viæ.

CATALEPSY. A sudden suppression of motion and sensation; the body remaining in the same posture that it was in when seized.

CATAMENIA. The menses.

CATAPLASM. A poultice.

CATARACT. A disease of the eye, known by diminished or destroyed sight, and by the interposition of a dark body between the object and the retina.

CATARRH. An increased secretion of mucus from the membranes of the nose, fances, windpipe, &c. attended with fever, sneezing, cough, thirst, lassitude, and want of appetite.—There are two species of catarrh, viz. *one* commonly called *a cold in the head*, and which is very frequent; and the *influenza*, which sometimes seizes a whole city, &c. Catarrh is also symptomatic of other diseases.

CATHARTICS, are those medicines which, taken internally, increase the number of alvine evacuations. The different articles referred to in this class of medicine are divided into five orders: 1. *Stimulating cathartics*, as *aloes*, *jalap*, *bitter apple*, *scammony*, and *gamboge*, which are well calculated to discharge accumulations of serum, and are mostly selected for indolent and phlegmatic habits, and those who are hard to purge. 2. *Cooling cathartics*, as *Cheltenham*, *Epsom*, *Glauber's*, or *Rochelle salts*; *sal polychrest*, and *cream of tartar*. These are better adapted to plethoric habits, and to those with an inflammatory diathesis. 3. *Astringent cathartics*, or such as possess a power, after their operation is finished, to bind the body; as *rhubarb*, and *damask roses*; which are mostly given to those whose bowels are weak and irritable, and subject to diarrhœa. 4. *Emollient cathartics*, as *castor oil*, *manna*, *olive*, or *cold-drawn linseed oil*; which may be given in preference to other cathartics to children and the very aged. 5. *Narcotic cathartics*, as *tobacco*, *henbane*, and *fox-glove*. This order is never given but to the very strong and indolent, and to maniacal patients, as their operation is very powerful. For Dr. G. Fordyce's remarks on Cathartics, &c. see page 276.

CAUSTIC. To burn.

CAUTERY. Actual, or the red hot iron applied to the part required.

CELLULAR MEMBRANE. The cellular structure, which is the connecting medium of every part of the body. It is by means of the communication of the cells of this membrane that the *fetid* or *diseased human breath* is conveyed by the *butcher's lungs* into *veal*.

CEPHALALGIA. Pain in the head.

CEPHALICS. Remedies that relieve disorders of the head.

CEPHALITIS. Inflammation of the head.

CHALK. Pure chalk is a neutral salt, formed by the union of the cretaceous acid with lime. It is used as an absorbent, &c.

CHALYBS. Steel, or iron.

CHANCER. A primary venereal ulcer.

CHARCOAL. See carbon.

CHLOROSIS. A disease which affects young females.

CHOLERA. A purging and vomiting of bile; or a discharge both upwards and downwards, of bilious or other acrid matter, with great pain and fever.

CHOKER DAMP. See Carbonic acid gas.

CHOREA SANCTA VITI; or **St. VITUS'S DANCE**. A convulsive or spasmodic motion of the limbs, as if the persons were dancing.

CHRONIC. A disease is so called that is of long duration,

- lasting above six or eight weeks; and is opposed to *acute diseases*, or those which terminate in a few days.
- CHYLE.** The milk like liquor which the food is converted into by digestion, and the fluid substance from which the blood is formed.
- CHYLIFICATION.** The process carried on in the small intestines, by which the chyle is separated from the chyme.
- CHYLOPOETIC.** Any thing connected with the formation of chyle.
- CHYME.** That pulpy indigested mass into which the food in the stomach is resolved and mixed with the gastric juice previous to its passing into the intestines; there to be mixed with bile and other juices of the body, before it is converted into blood.
- CINCHONA.** Quinquina. Jesuit's, or Peruvian bark.
- CITRATS.** Salts formed by the union of the citric acid with different bases
- CITRIC ACID.** The juice of lemons.
- CLINICAL.** Any thing concerning a bed; thus clinical lectures, notes, a clinical physician, &c.; which mean lectures and observations taken from patients when in bed.
- CÆLIAC PASSION.** A species of diarrhæa.
- COLD.** A species of catarrh.
- COLICA.** The colic. It is known by a pain in the belly, and a sensation like a twisting round the navcl, attended with vomiting and costiveness. The species of colic are:—
1. *A bilious colic.* 2. *A flatulent colic.* 3. *An hysterical colic.* 4. *A nervous colic.* See page 229.
- COLLYRIUM.** To check a defluxion. Any medicine was formerly so called, which was applied with that intention; the term is now only used for fluid applications, as lotions for the eyes, or eye waters.
- COMA.** A propensity to sleep.
- COMBUSTION.** To burn.
- COMPENDIUM.** An abridgment or summary; that which contains much in a narrow room.
- CONGELATION.** The transition of a liquid into a solid state, in consequence of an abstraction of heat.—i. e. *freezing.*
- CONSTIPATION.** Costiveness.
- CONSUMPTION.** Decline. See phthisis pulmonalis.
- CONTAGION.** Infection.
- CONTRACTION.** To draw together.
- CONTUSION.** A bruise.
- CONVULSION.** An involuntary contraction of the fibres and muscles, whereby the body &c. are preternaturally distorted.
- CORDIALS.** Medicines are generally so termed, that possess warm and stimulating properties, and that are given to raise the spirits.

- CORNS.** Hardened portions of cuticle, produced by pressure: so called, because a piece can be picked out like a corn of barley.
- CORROSIVES.** See escharotics.
- CORTEX.** Any rind or bark.
- CORYZA.** An increased discharge of mucus from the nose.
- COSMETIC.** An application *intended* to preserve the beauty and smoothness of the skin.
- COUGH.** See tussis.
- CRAMP.** A spasm of a muscle or muscles.
- CRISIS.** The sudden change of symptoms in acute febrile diseases, indicating recovery or death.
- CROUP.** Inflammation of the trachea. See Cynanche.
- CRUSTA LACTEA.** A disease that mostly attacks some part of the face of infants at the breast. It is known by an eruption of broad pustules, full of glutinous liquor, which form white scabs when they are ruptured. Mineral alteratives are the proper internal remedies; and lime water is a useful and innocent external application.
- CRYSTALLIZATION;** is such a combination of saline particles, as resemble the form of a crystal, variously modified according to the nature and texture of the salts.
- CUTICLE.** The exsperidermis or scarf-skin.
- CUTIS.** The true skin.
- CYNANCHE.** Is that species of angina, or quinsy, in which the tongue is inflamed and swelled, so that it hangs out between the teeth; and is thus named from dogs hanging out their tongues at times. It is known by a pain and redness of the throat, attended with a difficulty of swallowing and breathing. There are five species of cynanche, including the croupe. The *mumps*, or inflammation of the parotid glands, is another of the five species of cynanche.
- CYNOREXIA.** A voracious or canine appetite.
- CYSTITIS.** Inflammation of the bladder.
- DECOCTION.** Any medicine boiled in a watery fluid.
- DECOMPOSITION.** A separation of parts.
- DECREPITATION.** A kind of crackling noise: it is peculiar to nitre and some other kinds of salts.
- DEFLUXION.** A discharge of a fluid from any part.
- DEGLUTITION.** Swallowing.
- DELETERIOUS.** Things of a poisonous nature.
- DELIQUESCENCE.** Deliquation, or the gradual melting down of crystallized salts, from exposure to the air.
- DELIQUIUM ANIMI.** Fainting. See syncope.
- DEMULCENT.** Such medicines as obtund or soften acrimonious humours, and is synonymous with *emollients*.
- DENTAGRA, or ODONTALGIA.** The tooth-ach.

- DENTIFRICE.** A medicine to clean the teeth.
- DENTITION.** The breeding or cutting of the teeth.
- DEOBSTRUENTS.** Medicines that are exhibited with a view of removing any obstruction.
- DETERGENTS.** Those applications are so termed by surgeons, which possess the property of cleansing foul ulcers.
- DETONATE.** The noise produced by the explosion of nitre, or substances containing nitre, when heated.
- DIABETES.** An immoderate discharge of urine.
- DIAGNOSIS.** In medicine, a term given to those signs which indicate the present state of a disease, its nature and cause; and by which one disease may be known from another; hence those symptoms which distinguish such affections are termed *diagnostic*.
- DIAPHORESIS.** Perspiration, or increased cutaneous secretion.
- DIAPHORETICS, or SUDORIFICS.** Medicines, which, from being taken internally increase the discharge by the skin; or all medicines which promote perspiration.
- DIAPHRAGM.** A muscle which divides the cavity of the thorax from that of the abdomen.
- DIARRHŒA.** A purging.
- DIASTOLE.** The dilation of the heart and arteries.
- DIGESTION.** The change that the food undergoes in the stomach, by which it is converted into chyme. In chemistry, it is an operation in which such matters as are intended to act slowly on each other, are exposed to a gentle heat continued for some time.
- DIGESTIVES.** A term used by surgeons to those substances which, when applied to an ulcer or wound, promote suppuration.
- DIGITALIS.** Common, or purple fox-glove.
- DILUENTS.** Common whey, &c.; which, in respect of the blood in a state of viscosity, are thinner than it, and therefore said to dilute or attenuate. There is no real diluent but water; every fluid is diluent as it contains water in it.
- DISCUTIENTS.** A term in surgery, applied to those substances which possess a power of repelling or resolving tumours.
- DISEASE.** Any alteration from perfect health, is a disease; or the state of a living body, wherein it is deprived of the exercise of any of its functions, whether vital, natural, or animal.
- DISLOCATION.** The secession of a bone of a moveable articulation, from its natural cavity.
- DISTILLATION.** A chemical process, very similar to

- evaporation, instituted to separate the volatile from the fixed principles by means of heat.
- DIURESIS.** An increased secretion of urine.
- DIURETICS.** Medicines which, taken internally, augment the flow of urine.
- DRASTIC.** A term applied to those medicines which are very violent in their action: — thus, drastic emetics, purges, &c.
- DYSENTERY.** A painful discharge from the bowels by stool. Dr. Cullen defines it to be a contagious fever, in which the patient hath frequent stools, accompanied with much griping, and followed by a tenesmus.
- DYSOREXIA.** The appetite depraved, or deficient.
- DYSPEPSIA.** Want of appetite, accompanied by nausea, vomiting, flatulence, heartburn, costiveness, and pain in the stomach, with other symptoms of debility in the organ of digestion. It is symptomatic of other diseases.
- DYSPNŒA.** Continual difficult respiration, without sense of stricture, and accompanied with cough through the whole course of the disease.
- DYSURIA.** Difficulty and pain in discharging the urine.
- EBULLITION.** Boiling.
- ECCHYMOSES.** A black and blue swelling, either from a bruise, or extravasation of blood.
- ECCOPROTICS.** Medicines whose operation is very gentle; such as manna, magnesia, &c.
- EFFERVESCENCE.** A small degree of ebullition.
- EFFLORESCENCE.** A preternatural redness of the skin.
- EFFLUVIA.** See contagion.
- ELASTIC FLUID.** A Vapour, or *Gas*.
- ELECTUARY.** A medicine containing several ingredients that are mixed together by a syrup, &c. nearly of the consistence of honey.
- ELEMENTS.** Radicals; first principles.
- EMBROCATION.** A fluid application to rub or apply to any part of the body.
- EMETICS.** Medicines capable of exciting to vomiting.
- EMMENAGOGUES,** Medicines to promote the menses.
- EMOLLIENTS.** See demulcents.
- EMPHYSEMA.** Inflated; a windy tumour, formed by the air insinuating itself, by a small wound, between the skin and muscles, into the cellular membrance, after the manner in which the butchers blow up their veal.
- EMPYEMA.** A collection of pus in the cavity of the thorax. It is one of the terminations of the pleurisy.
- EMPYREUMA;** or the offensive smell and taste which distil-

led waters, &c. receive from being too much exposed to the fire.

EMPYREUMATIC. Smelling as it were burnt.

EMULSION. A soft and somewhat oily medicine, resembling milk.

EMUNCTORY. The excretory ducts of the body are so termed.

ENDEMIC. A disease is so called that is peculiar to a certain class of people, or country.

ENEMA. A clyster or injection.

ENTERITIS. Inflammation of the intestines.

ENTEROCELE. Every hernia may be so called that is produced by the protusion of an intestine.

ENURESIS. An involuntary flow of urine.

EPHIDROSIS. a violent and morbid perspiration.

EPIDEMIC. A contagious disease is so termed that attacks many people at the same season, and in the same place: thus, putrid fever, plague, dysentery, &c. are often epidemic.

EPIDERMIS. The scarf-skin.

EPIGASTRIC REGION. That part of the abdomen which lies over the stomach.

EPIGLOTTIS. The cartilage at the root of the tongue, that falls upon the glottis or superior opening of the larynx.

EPILEPSY. Convulsions with sleep, and usually froth issuing from the mouth.

EPISPATICS. Substances which increase the action of the vessels, in those parts of the surface of the body to which they are applied, in such a manner as to produce an efflux of fluids there; as cantharides, &c.

EPISTAXIS. Bleeding at the nose.

EPULIS. An excrescence growing from the gums.

EPULOTICS. A term given by surgeons to those applications which promote the formation of skin.

ERETHISMUS. Increased sensibility and irritability.

ERRHINE. See sternutatories.

ERYSIPELAS. So named from the neighbouring parts being affected by the eruption. St. Anthony's fire.

ERYTHEMA. A morbid redness of the skin, as is observed upon the cheeks of hectic patients after eating.

ESCHAROTICS. Caustics, or corrosive applications.

ESSERA. A species of cutaneous eruption, which generally attacks the face and hands, and differs from the *nettle-rash*, in not being elevated.

EVAPORATION. The volatilization of a fluid by means of heat.

EXANTHEMA. An eruption upon the skin; as the measles, small pox, &c.

EXCRESCENCE. Any preternatural formation of the flesh.

EXCRETION. Is that separation of the animal substance, as ejects something quite out of the body as of no further use.

EXCITING CAUSE. Occasional or remote cause: the exciting causes of diseases are either external or internal.

EXPECTORANTS. Those medicines which increase the discharge of mucus from the lungs.

EXPIRATION. That part of respiration in which the air is expelled from the lungs. See respiration.

EXPULSION. See excretion.

EXSICCATION. Drying.

EXTRAVASATION. See ecchymosis.

FECES. Excrements; the alvine excretions; as also settlings of liquors.

FAINTING. See syncope.

FAUCES. The top of the throat; the space about the opening of the larynx and pharynx, which can be seen when the mouth is open and the tongue depressed.

FEBRIFUGE. A medicine that possesses the property of abating the violence of any fever.

FECULA. Such vegetable articles as sago, salep, starch, &c.

FERMENTATION. A spontaneous commotion in a vegetable substance, by which its properties are entirely changed.

FIBRE. A very fine simple filament; the first constituent parts of bodies.

FIXED AIR. See carbonic acid.

FIXED BODIES. Are those which bear a considerable degree of heat without evaporation, or losing any of their weight.

FLUID. Is that substance, whose particles easily yield to the least partial pressure or force impressed.

FLUOR ALBUS. See leucorrhœa.

FLUX. See dysentery.

FÆTUS. The child, enclosed in the uterus of its mother.

FORMIC ACID. The acid of ants.

FUNCTION. The power or faculty by which any action of an animated body is performed.

FUNGUS. A term in surgery to express any luxurious formation of flesh.

FUSION. A chemical process by which bodies are made to pass from the solid to the fluid state, in consequence of the application of heat.

GALL. The bitter fluid secreted by the liver.

GANGLION. An encysted tumour, formed in the sheath of a tendon, and containing a fluid like the white of an egg.

- GANGRENE.** A mortification of any part of the living body.
- GAROLE, or GARGARISM.** A fluid medicine to wash the throat.
- GASTRIC-JUICE.** A fluid separated by the capillary, or small, hair-like, exhaling arteries of the stomach; and is of the utmost importance in the process of digestion.
- GASTRITIS.** Inflammation of the stomach.
- GAS, or GAZ.** See *Carbonic acid gas*.
- GLAND.** An organic part of the body, composed of blood-vessels, nerves, and absorbents; and destined for the secretion or alteration of some peculiar fluid. They are of two sorts, viz. *conglobate*, (or the more simple,) and *conglomerate glands*; the latter being composed of many little conglobate or *lymphatic glands*.
- GLOBUS HYSTERICUS.** The air rising in the œsophagus, and prevented by spasm, from reaching the mouth; it gives the sensation of a ball ascending the throat.
- GLOTTIS.** The superior opening of the larynx at the bottom of the tongue.
- GOUT.** See arthritis.
- GUTTÆ ROSACÆ.** Red spots upon the face and nose.
- GUTTA SERENA.** A total loss of sight without any visible injury to the eye, the pupil mostly dilated and immovable.
- HÆMATEMESIS.** A vomiting of blood.
- HÆMOPTYSIS.** A spitting of blood.
- HÆMORRHAGIÆ.** Hæmorrhagies or affluxes of blood.
- HÆMORRHOIS, or HÆMORRHOIDES.** The piles.
- HALITUS.** A vapour or gas.
- HEAT.** See caloric.
- HECTIC.** By slow and *hectic fevers*, are meant those which are chronical and continual; and which, by a preternatural, though by a mild and remitting heat, consume the juices, induce a consumption, and impair the strength. Dr. Cullen does not rank this kind of fever as a genus, but considers it always as *symptomatic*.
- HEMICRANIA.** A pain that affects only one side of the head.
- HEMIOPSIA.** A defect of vision, in which the person sees the half, but not the whole of an object.
- HEMIPLEGIA.** A paralytic affliction of one side of the body.
- HEPATIC.** Any thing belonging to the liver.
- HEPATIC AIR.** Hepatic airs consist of inflammable air combined with sulphur, which exists in very different proportions. Where each ingredient is combined merely to saturation, it is called simply *sulphurated hydrogen*, but.

where the sulphur is in excess, it is termed *super-sulphurated hydrogen*. Sulphurated hydrogen, combined with any base, forms a *hydrosulphuret*.

HEPATITIS. Inflammation of the liver.

HERNIA. A rupture or tumour produced by the falling down of any viscus, covered by the common integuments.

HERPES. Tetters, or numerous small ulcers, in clusters; but that spread upon the skin, itch very much, and are difficult to heal. Mr. Bell, in his Treatise on Ulcers, comprehends them in the four following species, viz. 1. The dry tetter, which is the most simple of all the species; it appears indiscriminately in different parts of the body; but most commonly on the face, neck, arms, and wrists. 2. *Herpes Pustulosus*. It appears in the form of pustules which originally are separate and distinct, but which afterwards run together in clusters. 3. *Herpes Miliaris*. This breaks out indiscriminately over the whole body. 4. *Herpes Exedens*. So called from its destroying or corroding the parts which it attacks, and is attended always, more or less, with an erysipelatous-like inflammation. These last sometimes becomes cancerous. Herpes has been thought by many, to be produced by a bilious acrimony irritating the sub-cutaneous glands. Herpes sometimes are critical, more especially when they follow *jaundice, fever, &c.* and should therefore not be checked.

HYDATIDS. A very singular animal, formed like a bladder, and distended with an aqueous fluid. They are not unfrequently found in the natural cavities of the human body, as the abdomen, and ventricles of the brain, but more commonly in the liver, kidneys, and lungs; where they produce diseased actions of those viscera.

HYDRAGOGUE. Medicines are so termed which possess the property of increasing the secretions or excretions of the body, so as to cause the removal of water from any of its cavities, such as *tonics, diuretics, cathartics, &c.*

HYDRARGYRUS, HYDRARGYRUM, MERCURIUS VIVUS, ARGENTUM VIVUM. Mercury, or quicksilver.

HYDROCARDIA. Dropsy of the heart, or dropsy of the pericardium.

HYDROCEPHALUS. Dropsy of the brain, or dropsy of the head.

HYDROGEN. The principle of water; and in chemistry, one of the simple combustibles; the base of hydrogen gas, formerly called inflammable air, or phlogiston.

HYDROGEN GAS. Like air, is invisible and elastic, and capable of indefinite compression and dilatation. It is about ten times lighter than common air, and it is from

this levity that it was applied with success to the purpose of balloons. All burning substances are immediately extinguished by being plunged into this gas. It is therefore incapable of supporting combustion. Scheele, and others, have made experiments by inhaling it into their lungs, and Mr. Davy, of the Royal Institution, found great difficulty in breathing hydrogen for half a minute. It appears to prove fatal not by a noxious quality, but by excluding atmospheric air, the due supply of which, by respiration, is indispensable to life. Hydrogen gas is often collected in mines, and has been long known under the name of *fire-damp*; it is also extricated from stagnant water, &c. If oxygen, or pure atmospheric air, and hydrogen gas, be mixed together, they remain unaltered; but if an electric spark be made to pass through them, or a lighted taper be brought into contact, it instantly inflames with detonation. Water is composed of oxygen and hydrogen; and the combustion of hydrogen is nothing else but the act of its combination with oxygen.

HYDROMEL. A composition of water and honey.

HYDROPHOBIA. (Dread of water,) *canine madness*. In addition to the many remedies introduced in this Compendium, which have at different times been resorted to for the cure of this most dreadful disease,—the following medicine has the sanction of Dr. Lettsom's name:—from a letter which he has lately written to Dr. Crane, of Dorchester, the following instructions, &c. are taken—"In a formed hydrophobia, four ounces of *olive oil* was given the patient for six days, rubbing the body all over with olive oil, from the top of the head to the soles of the feet. This rubbing may be continued a few days after the patient is recovered. The efficacy of the use of oil was proved; for another man, in the same state of hydrophobia, to whom the recipe was not administered, and who was bitten by the same dog, died raving mad."—Dr. Crane always found olive oil very efficacious in the bite of vipers.

HYDROPS. Any species of dropsy may be so termed.

HYDROSARCA. Water in the cellular membrane. See *anasarca*.

HYDROTHORAX. Water in the chest; it is known by dyspnoea, paleness of the face, œdematous swelling of the legs, scarcity of urine, impatience of an horizontal situation, a sense of weight and tightness across the chest, sudden startings from sleep, and palpitations of the heart.

HYOSCIAMUS. Henbane; so named because hogs eat it as a medicine, or, because the plant is hairy and bristly like a swine. Henbane is a powerful *narcotic poison*. Neverthe-

less, it may be safely employed in medicine; and it has this advantage over opium and other narcotics in general, that it never renders the bowels costive, but, on the contrary, gently opens them.

HYPNOTICS. See anodynes.

HYPOCHONDRIASIS. Hypochondriac affections; a disease characterized by dyspepsia; languor and want of energy; dejection of mind, and apprehensions of evil, more especially respecting health, without sufficient cause; with a melancholic temperament. This complaint affords most excellent food for empirics of all descriptions.

HYSTERIA. Hysterics. It is characterized by a grumbling noise in the belly; a ball ascending to the throat, with a sense of suffocation, stupor, insensibility, and convulsions, involuntary laughing and crying; sleep interrupted by sighs; urine limpid and abundant, previous to the fit; and great sensibility and irritability of mind. There are four species.

ICOR. A thin, aqueous, and acrid discharge.

ICTERUS. The jaundice. It is characterized by yellowness of the skin and eyes; feces, white; and urine of a red colour.

IDIOPATHIC. A disease which does not depend on any other disease, in which respect it is opposed to a symptomatic disease, which is dependant on another complaint.

IDIOSYNCRASY. A peculiarity of constitution, in which a person is affected by certain stimuli, which, if applied to a hundred other persons, would produce no effect: thus some people cannot see a finger bleed without fainting; and thus violent inflammation is induced on the skin of some persons by substances that are perfectly innocent to others.

IMPETIGINES. Disorders in which the skin is affected with defecations or blemishes,

IMPETIGO. Is a cutaneous foulness, as the leprosy, &c. taking in the several kinds, from the most easy to the most obstinate. Dr. Cullen ranks the impetiginous diseases as an order of the class called—*cachexiæ*.

INCUBUS. The night mare. See oneirodynia gravans.

INDICATION. Is that which demonstrates in a disease what ought to be done. It is threefold: preservative, which preserves health; curative, which expels a present disease; and vital, which respects the powers and reasons of diet.

INFECTION. A synonym of contagion. See contagion.

INFLAMMABLE BODIES. Chemists distinguish by this term such bodies of the mineral kingdom only as burn with facility, and flame in an increased temperature.

INFLAMMATION. Phlogosis. Is characterized by redness,

heat, pain, and tumour on the surface of the body. There are two species: 1. *Phlegmone*, known by inflammation of a bright red colour; tumour pointed, throbbing, and tending to suppuration. 2. *Erythema*, which is inflammation of a dull red colour, vanishing upon pressure, spreading unequally, with a burning pain, and tumour scarcely perceptible, ending in desquamation (*scaling off*), or vesicles (*little bladders*) of the skin. Phlogosis often terminates in abscess, gangrene, or scirrhus.

INFLUENZA. A species of catarrh, so named because it was supposed to be produced by the influence of the stars.

INFUSION. A medicated liquor, formed by pouring either boiling, warm, or cold water, on the substance to be infused.

INJECTION. A medicated liquor, to throw into a natural or preternatural cavity of the body, by means of a syringe.

INOCULATION. The insertion of the variolous or vaccine matter under the skin, in order to communicate the small pox, or cow pox. It is usually done in the arm.

INSANIA. Insanity, or deranged imagination.

INSPIRATION. The act of drawing air into the lungs.

INTERMITTENT FEVER. An ague.

INTESTINES. The convoluted membranous tube that extends from the stomach to the anus.

IRRITABILITY. The contractility of muscular fibres, or a propensity peculiar to muscles, by which they contract upon the application of certain stimuli, without a consciousness of action.

IRRITATION. The action produced by any stimulus.

ISCHIAS. A rheumatic affection of the hip joint; one of the terminations of acute rheumatism.

ISCHURIA. A suppression of urine.

KALI. Barilla, natron, &c.

KIDNEYS. Two abdominal viscera, shaped like a kidney bean, that secrete the urine.

LACTEALS. The absorbents of the mesentery, which originate in the small intestines, and convey the chyle from thence to the thoracic duct.

LARYNX. A cartilaginous cavity, situated behind the tongue in the anterior part of the fauces, and lined with an exquisitely sensible membrane.

LEPRA. The leprosy; characterized by the skin being rough, &c; chapped, with white furfuraceous scales and crusts, under which is frequently a moisture, with itching.

LETHARGY. A heavy and constant sleep, with scarce any intervals of waking: when awakened, the person answers,

- but, ignorant or forgetful of what he said, immediately sinks into the same state of sleep. It is symptomatic of fever, sleep, apoplexy, &c.
- LEUCOPHLEGATIC.** A term applied by the older medical writers to a dropsical habit of body.
- LEUCORRŒA.** See fluor albus.
- LIENTERIA.** A species of diarrhœa. See diarrhœa.
- LIGAMENT.** A strong elastic membrane, that connects the extremities of moveable bones, and prevents the efflux of the synovia from the joints.
- LIME.** Calcareous earth.
- LIMON.** The lemon.
- LINCTUS.** A term in pharmacy that is generally applied to a soft and frequently somewhat oily substance, of the consistence of new honey.
- LINIMENT.** An oily substance of a mediate consistence between an ointment and oil, but so thin as to drop.
- LITHONTRIPTICS.** Those substances which possess a power of removing a disposition in the body to the formation of calculi, or the stone and gravel.
- LOCKED JAW.** A species of tetanus. See tetanus.
- LUMBAGO.** A rheumatic affection of the muscles about the loins.
- LUMBRICUS.** A species of worm which inhabits occasionally the human intestines. It has three nipples at its head, and a triangular mouth in its middle. Its length is from four to twelve inches, and its thickness, when twelve inches long, about that of a goose-quill. They are sometimes solitary, at other times very numerous.
- LUNGS.** Two viscera, situated in the cavities of the chest, by means of which we breathe.
- LUXATION.** See dislocation.
- LYMPH.** A crystalline tasteless fluid, contained in all the absorbent vessels, except the lacteals. It is absorbed from the cellular structure of the whole body, from all the viscera and cavities of the viscera, and conveyed to the thoracic duct, there to be mixed with the chyle.
- LYMPHATIC GLANDS.** See conglobate glands.
- LYMPHATICS.** Absorbent vessels that carry the lymph.
- MACIES.** A wasting of the body. See atrophy and tabes.
- MALATS.** Salts formed by the union of the malic acid, or acid of apples, with different bases; thus *malut of copper*, *malat of lead*, &c.
- MANIA.** Raving, or furious madness.
- MARASMUS.** Emaciation; a wasting away of the flesh.
- MARCORES.** Universal emaciation.
- MARROW.** Medulla. The fat substance secreted by the

- small arteries of its proper membrane, and contained in the medullary cavities of the long cylindrical bones.
- MASTICATION.** Chewing.
- MATURATION.** A term in surgery, signifying that process which succeeds inflammation, by which pus is collected in an abscess.
- MAXILLA.** The jaw.
- MECCA,** Balsam of. *Balsam of Gilead, or opobalsamum.*
- MECONIUM.** The green excrementitious substance that is found in the large intestines of the fœtus.
- MEDIASTINUM.** The membranous partition, formed by the duplicature of the pleura, that separates the cavity of the chest into two parts.
- MEDICINE.** Any substance that is exhibited with a view to cure or allay the violence of a disease: it is also very frequently made use of to express the healing art, when it comprehends anatomy, physiology, and pathology.
- MEMBRANE.** A thin expanded substance, as the skin, &c.
- MENAGOGUES.** See emmenagogues.
- MENORRHAGIA.** An immoderate flow of the menses.
- MENTAGRA.** An eruption about the chin, forming a tenacious crust, like that on scald heads.
- MEPHITIS.** Mephitic or stinking vapours, or exhalations.
- MERCURY.** Quicksilver.
- MESENTERIC GLANDS.** These are conglobate, and are situated in various parts in the cellular membrane of the mesentery. The chyle from the intestines passes through these glands to the thoracic duct.
- MESENTERY.** The membranous viscus in the cavity of the abdomen, attached to the vertebræ of the loins, and to which the intestines adhere.
- METASTASIS.** The removal of a disease from one place to another.
- MIASMA.** See contagion.
- MILIARIA.** (Millet; so called because the small pustules or vesicles upon the skin resemble millet-seed). Miliary fever.
- MINERALOGY.** That part of natural history which relates to minerals.
- MINERALS.** Inorganized or inanimate bodies.
- MINERAL WATERS.** See waters mineral.
- MINERAL SALTS.** See saline substances.
- MORTIFICATION.** See gangrene.
- MUMPS.** A disease of the parotid glands. See cynanche.
- MUSCLES.** The organs of motion.
- MUTITAS.** Dumbness.
- NÆVI MATERNI.** Mother's marks.

- NARCOSIS.** Stupefaction, stupor, numbness.
- NARCOTICS.** See anodynes.
- NATES.** The fleshy parts upon which we sit.
- NATRON.** Mineral alkali, soda, or purified barilla.
- NATRON MURIATUM.** Common salt.
- NATRON PURIFICATUM.** Nitre, or purified salt-petre.
- NATURAL ACTIONS.** Those actions by which the body is preserved; as hunger, thirst, &c.
- NAUSEA.** A disgust of food, approaching to vomiting.
- NECROSIS.** The dry gangrene. A species of mortification, in which the parts become dry, insensible, and black, without any previous inflammation.
- NEPHRALGIA.** Pain in the kidneys.
- NEPHRITIS.** Inflammation in the kidneys.
- NEPHRITICS.** Medicines for diseases of the kidneys.
- NERVE.** Formerly meant a sinew; this accounts for the opposite meaning of the word *nervous*; which sometimes means strong, sinewy; and sometimes weak and irritable. Nerves are long white medullary cords that serve for sensation: they originate from the brain and spinal marrow.
- NERVINES.** Medicines that relieve disorders of the nerves.
- NERVOUS FEVER.** A species of typhus.
- NERVOUS FLUID.** Nervous principle.
- NEUROSES.** Nervous diseases.
- NEUTRAL SALTS.** Secondary salts; possessing neither the characters of acid nor alkaline salts.
- NICOTIANA.** Tobacco. Named from Mr. Nicott, who first brought it into Europe.
- NITRATES.** Neutral salts, formed by the union of the nitric acid with different bases.
- NITRE.** Salt petre.
- NITROGEN GAS.** A synonym of azote.
- NIGHT-MARE.** Incubus. See oneirodynia gravans.
- NOCTAMBULATION.** Walking in the night when asleep.
- NOLI ME TANGERE.** Touch-me-not; a species of herpes that is very difficult to cure, and so termed, because it is exasperated by most applications.
- NON-NATURALS.** Under this term, physicians comprehend air, meat and drink, sleep and watching, motion and rest, retention and excretion, and the affections of the mind.
- NOMOLOGY.** The doctrine of the names of diseases.
- NOSTALGIA.** A vehement desire of revisiting one's native country; attended with gloom and melancholy, loss of appetite, and want of sleep.
- NUCHA.** The hind part or nape of the neck.
- NUTRITION.** The apposition of the nutritious juice, to parts which are, by a law of nature, to increase, or to parts

that are worn out. Nutrition is a consequence of digestion and circulation.

NYCTALOPS. A defect in vision, by which the patient sees little or nothing in the day, but in the evening and night, sees tolerably well.

NYSTAGMUS. A twinkling of the eyes, such as happens when a person is very sleepy.

OBSTETRIC. Belonging to midwifery.

OBSTIPATION. Costiveness.

OCCIPUT. The hinder part of the head.

ODONTALGIA. The tooth-ach.

ŒDEMA. See anasarca.

ŒSOPHAGUS. The membranous and muscular tube that descends in the neck from the pharynx to the stomach.

OFFICINAL. Any medicine, directed by the colleges of physicians to be kept in the shops, is so termed.

OLFACTORY NERVES. The first pair of nerves are so termed, because they are the organs of smelling.

OMENTUM. Epiploon; the caul.

ONEIRODYNIA. A dream, or disturbed imagination during sleep.

ONEIRODYNIA GRAVANS. Incubus, or night-mare.

OPHTHALMIA. An inflammation of the membranes of the eye, or of the whole bulb of the eye.

OPHTHALMODYNIA. A vehement pain in the eye, without, or with very little redness.

OPIATES. Medicines that procure sleep, &c. See anodynes.

OPISTHOTONOS. See tetanus.

ORTHOPNOEA. A very quick and laborious breathing, during which, the person is obliged to be in an erect posture.

OSTEOLOGY. The doctrine of the bones.

OTITIS. Inflammation of the internal ear.

OXYD. Calx. A substance formed by the union of oxygen with a basis: thus *oxyd of iron, lead, &c.*

OXYGEN. Is the principle on which most of the chemical qualities of atmospheric air depend. Its tendency to combination is so strong, that it has never been procured in a separate state. Oxygen gas, or the combination of oxygen with caloric, is its most simple form. This is permanently elastic, compressible, transparent, inodorous, and insipid. Its specific gravity, according to Dr. Duncan, is 0.00135. It supports inflammation; is necessary for respiration and vegetation, and is decomposed in all these processes; it constitutes 0.22 of the bulk of atmospheric air. Oxygen is also a principal constituent in water, in all acids, and metallic oxides, and in almost all animal and vegetable sub-

stances. It is separated from many of its combinations by the sun's rays.

PALATE. The roof of the mouth.

PALPITATIO. Palpitation of the heart, which is either constant or frequently returning.

PALSY. See hemiplegia, paraplegia, and paralysis.

PANACEA. To make well. An epithet given by the ancients to those remedies which they conceived would cure every disease. Unfortunately for those of the present day, there are no such remedies.

PANCREAS. A glandular viscus of the abdomen.

PANDEMIC. A synonym of epidemic.

PANOPHOBIA. That kind of melancholy which is attended with groundless fears. The moderns consider it as symptomatic.

PAPAVER ALBUM. The white poppy. It is from heads of this plant that the opium is obtained.

PAPPILLA. The nipple of the breast.

PAPPILLÆ. This term is applied by anatomists to the fine terminations of nerves, &c. as the nervous papillæ of the tongue, nose, skin, &c.

PARACUSIS. Hearing depraved, singing in the ears.

PARALYSIS. The palsy.

PARAPHONIA. Alteration in the voice.

PARAPHRENITIS. An inflammation of the diaphragm.

PARAPLEGIA. Palsy of one half of the body taken transversely.

PAREGORICS. Medicines that allay pain.

PARENCHYMA. It is applied to the connecting medium of the substance of the lungs.

PARESIS. an imperfect palsy.

PARONYCHIA. A whitlow, or whitloe.

PAROTID GLAND. A large conglomerate and salival gland, situated under the ear.

PAROXYSM. A periodical exacerbation or fit of a disease.

PARULIS. A gum boil.

PATHOGNOMONIC. A term given to those symptoms which are peculiar to a disease. They are also termed proper or characteristic symptoms.

PATHOLOGY. The doctrine of diseases.

PECTORALS. Medicines that relieve disorders of the chest.

PEDILUVIUM. A bath for the feet.

PEMPHIGUS. A fever attended by successive eruptions of serous vesicles about the size of almonds.

PERIBLEPSIS. That kind of wild look which is observed in delirious persons.

PERICARDITIS. Inflammation of the pericardium.

- PERICARDIUM.** The membranous bag that surrounds the heart.
- PERICRANIUM.** The membrane that is closely connected to the bones of the head.
- PERIOSTEUM.** The membrane which invests the external surface of all the bones except the crowns of the teeth.
- PERIPNEUMONIA.** Peripneumony, or inflammation of the lungs.
- PERIPNEUMONIA NOTHA.** Bastard or spurious peripneumony.
- PERISTALTIC MOTION.** The vermicular motion of the intestines.
- PERITONÆUM.** The membrane lining the abdomen, and covering the viscera.
- PERITONITIS.** An inflammation of the peritonæum.
- PERSPIRATION.** The vapour that is secreted by the extremities of the cutaneous arteries from the external parts of the body. It is distinguished into sensible and insensible.
- PERTUSSIS.** The whooping cough.
- PERVIGILIUM.** Watching, or a want of sleep.
- PESTIS.** The plague.
- PETECHIÆ.** Red or purple spots, (resembling flea bites,) that mostly appear in contagious diseases.
- PETROLEUM.** A liquid bituminous substance, found in different places, at the surface of the earth.
- PHAGEDÆNA.** A species of ulcer that spreads very rapidly.
- PHAGEDÆNICS.** Medicines that destroy fungous flesh.
- PHARMACY.** The art of preparing medicines.
- PHARMACŒPIA.** The book that contains directions for preparing medicines.
- PHARYNX.** The muscular bag at the back part of the mouth. Its use is to receive the food and convey it into the œsophagus.
- PHLEBOTOMY.** Bleeding, (venesection,) or the opening of a vein.
- PHLEGM.** In chemistry it means water; but in the common acceptance of the word, it is a thick and tenacious matter secreted in the lungs.
- PHLEGMASIA.** An inflammation.
- PHLEGMASIÆ.** Inflammations. They are characterized by pyrexia, with topical pain and inflammation; the blood after venesection exhibiting a buffy coat.
- PHLEGMON.** An inflammation of a bright red colour, with a throbbing and a pointed tumour, tending to suppuration.
- PHLOGISTON.** The inflammable principle.
- PHLOGOSIS.** Inflammation.
- PHLYCTÆNÆ.** Small pellucid vesicles or bladders that contain a serous fluid.

- PHOSPHATS.** Salts formed by the union of the phosphoric-acid with different bases.
- PHOSPHOROS.** One of the most combustible substances we are acquainted with.
- PHRENES.** The diaphragm.
- PHRENTIS.** Phrenzy, or inflammation of the brain.
- PTHIRIASIS.** A disease in which several parts of the body generate vermin, which often puncture the skin, and produce little sordid ulcers.
- PTHISIS.** Pulmonary consumption; known by emaciation, debility, cough, hectic fever, purulent expectoration, hæmoptysis, diarrhæa. There are seven species of this disease.
- PHYMA.** Tubercles in any part of the body.
- PHYSCONIA.** Enlargement of the abdomen.
- PHYSIOGNOMY.** The art of knowing the disposition of a person by the countenance.
- PHYSIOLOGY.** The science which treats of the actions and powers of animated bodies.
- PHYSOCEPHALUS.** Emphysema of the head.
- PHYTOLOGY.** That part of natural history which treats of plants.
- PICA.** Depraved appetite, with strong desire for unnatural food. It is very common to pregnant women.
- PILES.** See Hæmorrhoids.
- PITUITA.** Phlegm; or viscid and glutinous matter.
- PLETHORA.** A redundance of blood.
- PLEURA.** A membrane which lines the internal surface of the thorax, and covers its viscera.
- PLEURITIS.** Pleurisy or inflammation of the lungs.
- PLEURODYNIA.** A pain in the side, from a rheumatic affection of the pleura.
- PLEURO-PNEUMONIA.** An inflammation of the lungs and pleura.
- PLEXUS.** A net work of vessels. The union of two or more nerves is also called a plexus.
- PLICA POLONICA.** A disease of the hairs, in which they become long and coarse, matted and glued into inextricable tangles. It is peculiar to Poland and Tartary.
- PNEUMATICS.** That part of natural philosophy which treats on the properties of air.
- PNEUMONIA.** Inflammation of the lungs.
- PODAGRA.** The gout.
- PORRIGO.** A disease very common among children, in which the skin of the hairy part of the head becomes dry and callous, and comes off like bran, upon combing the head.

- POT-ASH.** See alkali vegetable.
- PRÆCORDIA.** The fore part of the region of the heart.
- PRIMÆ VIÆ.** The first passages. The stomach and the intestinal tube are so called, and the lacteals the *secundæ viæ*.
- PROFLUVIA.** Fluxes.
- PROFUSIO.** A loss of blood.
- PROGNOSIS.** The judgment of the event of a disease by particular symptoms.
- PROLAPSUS.** A protrusion.
- PROXIMATE CAUSE.** The proximate cause of a disease may be said to be in reality the disease itself. All proximate causes are either diseased actions of simple fibres, or an altered state of the fluids.
- PRURIGO.** A violent itching.
- PRURITUS.** The same as prurigo.
- PSELLIMUS.** An hesitation or defect of speech.
- PSEUDOBLEPSIS.** An imaginary vision of objects.
- PSORA.** The itch.
- PSOROPHTHALMIA.** A seabby eruption, or itch-like pustles of the eyelids and their margins.
- PSYDRACIÆ.** Red and somewhat elevated spots, which soon form broad and superficial vesicles, such as those produced by the stinging-nettle, the bites of insects, &c.
- PTYALISM.** A salivation, or increased secretion of saliva from the mouth.
- PUERPERAL FEVER.** Child-bed fever. Dr. Cullen considers this disease as a species of continued fever.
- PULEGIUM.** (From *pulex*, a flea; because the smell of its leaves burnt, destroys fleas.) Pennyroyal.
- PULSE.** The beating of the artery at the wrist is termed the pulse. It depends upon, and is synchronous with, or happening at the same time as, that of the heart. Hence physicians feel the pulse to ascertain the quickness or tardiness of the blood's motion, the strength of the heart, &c.
- PUPIL.** The round opening in the middle of the iris, in which we see ourselves in the eye of another.
- PUS.** A whitish, bland, cream-like fluid, found in phlegmonous abscesses, or on the surface of sores. It is distinguished, according to its nature, into laudable or good pus, serophulous, serous, and ichorous pus, &c.
- PUSTULÆ.** Pustules. Small tumours, at first of a red or yellow colour, whose apex soon contains pus, and then forms a purulent crust.
- PUTREFACTION.** Putrid fermentation.
- PUTRID FEVER.** A species of typhus. See typhus gravior.
- PYLORUS.** The inferior aperture of the stomach which opens into the intestines.

PYRETOLOGY. A discourse or doctrine on fevers.

PYREXIA. Fever.

PYREXIÆ. Febrile diseases; characterized by frequency of pulse after a cold shivering, with increase of heat, and especially, among other impaired functions, a diminution of strength.

PYRITES. So called because it strikes fire with steel; a metallic substance, formed of iron mixed with sulphur.

PYROSIS. The heartburn or water brash; known by a burning pain in the stomach, attended with copious eructations, generally of a watery fluid, sometimes acrid, but frequently insipid, and considerable in quantity.

QUARTAN AGUE. An intermittent fever or ague. It is known by cold, hot, and sweating stages in succession, attending each paroxysm, and followed by an intermission or remission: the paroxysms come on in the afternoon, with an interval of about seventy-two hours.

QUICKSILVER. See hydrargyrus.

QUINCY. See cynanche.

QUOTIDIAN AGUE. The paroxysms return in the morning, at an interval of twenty-four hours: while in a *tertian ague* the paroxysms come on at mid-day, at an interval of forty-eight hours.

QUARTZ. This name is given the opaque or irregularly vitrifiable stone.

RACHITIS. The *rickets*; known by a large head, prominent forehead, protruded sternum, flattened ribs, big belly, and emaciated limbs, with great debility.

REAGENTS. *Tests*; such substances as enable the chemist to draw conclusions respecting the nature and properties of the bodies to be examined, either by means of those alterations which they suffer themselves, or produce in others.

RECTIFICATION. A second distillation.

RECTUM. The last portion of the large intestines.

REGIONS. The human body is divided by anatomists into the trunk and extremities: *i. e.* the head, and inferior and superior extremities, each of which have certain regions before any part is removed, by which the physician is enabled to direct the application of blisters and the like, and the situation of diseases is better described.

REGULUS of ANTIMONY. Pure semi-metal of antimony.

REMOTE CAUSE. See exciting cause.

RESINS. The name of resin is given to a dry inflammable substance, not miscible with water, soluble in oils and spirit of wine.

RESOLVENTS. This term is applied by surgeons, to such substances as discuss inflammatory tumours.

RESOLUTION. A termination of inflammatory affections, in which the disease disappears without inducing any other complaint.

RESPIRATION. A compound action, consisting of inspiration and expiration.

RETE MUCOSUM. A inticous substance, deposited in a net-like form, between the epidermis and cutis, which covers the sensible cutaneous papillæ, connects the epidermis with the cutis, and gives the colour to the body: in Europeans it is of a white colour, in Ethiopians, black.

RETICULAR. Interwoven like a net.

RETINA. The third or innermost membrane of the eye; it is the true organ of vision.

RETORT. A chemical vessel so called.

RHEUMA. The discharge from the nostrils or lungs arising from cold.

RHEUMATISM. A defluxion, with pains in the joints, &c. increased by the action of the muscles belonging to the joint; and heat on the part. The blood, after venesection, exhibits an inflammatory crust.

RUPTURE. See hernia.

SACCHARUM. Sugar.

SACCHARUM CANADENSE. The sugar obtained from a species of maple-tree in Canada, and imported into some parts of Europe. It is supposed to be efficacious in disorders of the breast. The juice, unboiled, has been taken as an antiscorbutic.

SACCHO-LACTIC ACID. The sugar of milk in combination with oxygen.

SACCHOLATS. Salts formed by the combination of the saccholactic acid with different bases, as *saccholat of iron*, &c.

SAGO. A dry fecula, obtained from the pith of a species of palm in the islands of Molucca, Java, and the Phillipines.

SAINT ANTHONY'S FIRE. See erysipelas.

SAINT VITUS'S DANCE. See chorea sancti viti.

SALINE SUBSTANCES. The number of them is very considerable. They possess peculiar characters, by which they are distinguished from other substances. It must not, however, be concluded, that substances are not of a saline nature, because these properties are scarcely evident in them; as it may often happen, that two species, which possess them in a very small degree, exhibit them still less when they come to be united; and there are likewise instances of the contrary effect taking place. The chemical

nature of salts, though better known than formerly, is by no means yet perfectly understood. It is ascertained, that they, for the most part, contain a very great quantity of vital air, and that this fluid is fixed, in combination with a combustible of a different nature, in different kinds of salts.

SALIVA. The fluid which is secreted by the salivary glands into the cavity of the mouth.

SALIVAL DUCTS. The excretory ducts of the salivary glands.

SALIVATION. An increased secretion of saliva.

SALIX. The willow. The bark of the branches of the *Salix fragilis* of Linnæus, or the crack willow, is recommended as a good substitute for Peruvian bark, and is said to cure intermittents, and other diseases requiring tonic and astringent medicines.

SALT-PETRE. See nitre.

SALTS. Salts, with respect to their chemical properties, are divided into two classes : into acid salts or acids, and into alkaline salts or alkalies ; and from the mutual combination of these two arises a third class, viz. that of neutral, or secondary salts.

SECONDARY or NEUTRAL SALTS. They are called neutral, because they do not possess the characters of acid nor alkaline salts, which are primitive salts ; such are Epsom salts, alum, nitre, &c.

SARDONIC LAUGH. So called from the herb *sardonia*, which grows in the island Sardonis, and is said to produce a convulsive laughter.

SCABIES. See psora.

SCALD HEAD. The vulgar name for *tinea capitis*. See *tinea*.

SCAPULA. The shoulder blade.

SCARF-SKIN. Epidermis, or the outer skin.

SCARIFICATION. A superficial incision made with a lancet, or a surgical instrument called a scarificator.

SCARLATINA. The scarlet fever. It has two species ; the one mild, the other accompanied with ulcerated sore throat.

SCARLATINA CYNANCHIA, or ANGINOSA. The scarlet fever, with ulcerated sore throat.

SCIATICA. A rheumatic affection of the hip joint.

SCHIRRUS. A hard tumour of a glandular part ; indolent, and not readily suppurating.

SCORBUTUS. The scurvy : characterized by extreme debility ; complexion pale and bloated ; spongy gums ; livid spots on the skin ; breath offensive ; œdematous swellings in the legs ; hæmorrhagies ; foul ulcers ; fetid urine ; and extremely offensive stools.

SCORIÆ. Dross; the refuse or useless parts of any substance.

SCRIBICULUS CORDIS. The pit of the stomach.

SCROFULA, or SCROPHULA. Struma; the king's evil: known by swelled lymphatic glands; thick upper lip, obstinate ulcers; redness of the margin of the instep; indolent tumours on the joints; fair complexion; and an irritable habit.

SEBACEOUS GLANDS. Glands which secrete a sebaceous or suetty humour.

SEBATES. Salts formed by the combination of the acid of fat, or sebacic acid, with different bases; thus, *sebate of copper, sebate of lead, &c.*

SECALE. Rye. This substance is principally used as an article of diet; and in the northern countries of Europe is employed for affording an ardent spirit.

SECRETION. A function by which different organs separate from the blood substances destined for particular uses: as the bile in the liver, saliva, in the mouth, &c.

SEDATIVES. Those medicines are so termed which have the power of diminishing the animal energy, without destroying life.

SELINE. A disease of the nails, in which white spots are occasionally seen in their substance.

SENSATION. Sensation or feeling is the consciousness of a change taking place in any part, from the contact of a foreign body with the extremities of our nerves. The seat of sensation is in the pulp of the nerves.

SENSIBILITY. The capability which a nerve possesses of conveying the sensation produced by the contact of another body with it. All parts possessed of a power of producing a change so as to excite a sensation, are called *sensible*; those which are not possessed of this property *insensible*. To the insensible parts by nature belong all our fluids, the blood, bile, saliva, &c. and much of the solids, the hair, epidermis, nails, &c; but the sensible parts are the skin, eyes, tongue, ear, nose, stomach, intestines, &c.

SENSORIUM, SENSORIUM COMMUNE. The brain.

SENSES. Man is said to have five external senses, and five internal senses; namely, the sense of touch, taste, smelling, seeing, and hearing, which are external senses; and memory, imagination, conscience, affections of the mind, and reason, which are internal senses.

SEPTIC. Relating to putrefaction.

SERPIGO. A synonym of herpes. See herpes.

SERUM. The serum of the blood; the yellow and somewhat greenish fluid which separates from the blood, when cold and at rest.

SESQUI. This word, joined with any number, weight, measure, &c. signifies one integer and a half: as *sesqui granum*, a grain and a half.

SETON. An artificial ulcer made under the skin, which carries with it a portion of thread or silk, that is moved backwards or forwards, and thus keeps up a constant irritation.

SHINGLES. An erysipelatous herpetic eruption, extending sometimes round the body, in small distinct vesicles, which itch intolerably, and induce a high degree of fever.

SIALAGOGUES. Those medicines are so called, which excite an uncommon flow of saliva: such are mercurial preparations, &c.

SIGHT. Vision. The organ of this sense is the retina of the optic nerve.

SINAPISM. A term given to a mixture of mustard and vinegar in form of poultice.

SINCIPUT. The fore part of the head.

SINGULTUS. Hiccup. A convulsive motion of the diaphragm and parts adjacent.

SINUS. A cavity or depression.

SKIN. See cuticle and cutis.

SLEEP. The end and design of sleep is both to renew, during the silence and darkness of the night, the vital energy, which has been exhausted through the day, and to assist nutrition.

SMELLING. The organ of this sense is the nervous papillæ, which are distributed over the pituitary membrane of the nostrils.

SODA. See natron, mineral alkali, and barilla.

SOLUTION of CONTINUITY. A term given by modern surgeons to any space occasioned by a wound, ulcer, &c.

SOPOR. Profound sleep.

SOPORIFEROUS. Those medicines which induce sleep.

SPASM. A spasm or convulsion. An involuntary contraction of muscular fibres, or that state of the contraction of muscles which is not spontaneously disposed to alternate with relaxation. When the contractions alternate with relaxation, which are frequently and preternaturally repeated, they are called convulsions. Spasms are distinguished by authors into clonic and tonic spasms. See *convulsion* and *tonic spasm*.

SPASMI. Spasmodic diseases.

SPECIFICS. Such remedies as have an infallible efficacy in the cure of disorders. The existence of such remedies is doubted.

SPHACELUS. See gangrene.

SPHINCTER. The name of several muscles, whose office is to shut or close the aperture around which they are placed.

- SPINA VENTOSA.** A tumour arising from an internal caries of a bone.
- SPLEEN.** The spleen or milt, a spongy viscus, whose use is unknown.
- SPLENITIS.** Inflammation of the spleen.
- SPLENOCELE.** A rupture of the spleen.
- SPORADIC.** An epithet for such diseases as seize particular persons, at the same time or season.
- STEATOMA.** An encysted tumour, whose contents are of a suetty consistence.
- STEEL.** The best, hardest, finest, and closest grained iron, combined with carbon by a particular process.
- STERNUM.** The breast bone.
- STIMULANTS.** Medicines are so termed which possess a power of exciting the animal energy.
- STIMULUS.** Any thing which irritates.
- STOMACACE.** A fetor in the mouth with a bloody discharge from the gums.
- STOMACH.** A membranous receptacle, situated in the epigastric region, which receives the food from the œsophagus; its figure is somewhat oblong and round: it is largest on the left side, and gradually diminishes towards its lower orifice, where it is the least. Its superior orifice, where the œsophagus terminates, is called the *cardia*; the inferior orifice where the intestine begins, the *pylorus*.
- STOMACHICS.** Medicines which excite and strengthen the action of the stomach.
- STRABISMUS.** Squinting; an affection of the eye, by which the person sees objects in an oblique manner, from the axis of vision being distorted.
- STRANGURY.** A difficulty of making water, attended with pain and dripping.
- STRUMA.** This term is applied by some authors to serophula, and by others to an induration of the thyroid gland, which is endemial to the Tyrolese and Swiss.
- STUPOR.** Insensibility.
- STYPTICS.** A term given to those substances which possess the power of stopping hæmorrhagies, such as turpentine, alum, &c.
- SUBCUTANEOUS GLANDS.** These are sebaceous glands, lying under the skin, which they perforate by their excretory ducts.
- SUBLINGUAL GLANDS.** The glands which are situated under the tongue, and secrete saliva.
- SUBMERSION.** Drowning.
- SUBSULTUS TENDINUM.** Weak convulsive motions or twitchings of the tendons, mostly of the hands, generally observed in the extreme stages of putrid fever.

SUDAMINA. Vesicles resembling millet-seeds in form and magnitude, which appear suddenly without fever, especially in the summer time, after much labour and sweating.

SUDORIFICS. A synonym of diaphoretics. See diaphoretics.

SUPPURATION. That morbid action by which pus is deposited in inflammatory tumours.

SUTURE. In surgery this term signifies the uniting the lips of a wound by sewing.

SYMPATHY. When an affection takes place in any part remote from another which is diseased, and depends upon it, the affection is said to arise from sympathy or consent of parts, through the medium of the nerves; thus locked-jaw from a disease of the toe, laborious respiration from a disease of the pleura, &c.

SYNCOPE. Fainting or swooning; in which the respiration and action of the heart either cease, or become much weaker than usual, with paleness and coldness, arising from diminished energy of the brain, or from organic affections of the heart.

SYNOCHA. Inflammatory fever. A species of continued fever; characterized by increased heat; pulse frequent, strong, hard, urine high coloured; senses not much impaired.

SYNOCHUS. A mixed fever; a species of continued fever.

SYNOVIA. An unctuous fluid secreted from certain glands in which it is contained. Its use is to lubricate the cartilaginous surfaces of the articulatory bones, and to facilitate their motions.

SYNTHESIS. Combination. See analysis.

SYPHILIS. The venereal disease.

SYRUP. If this preparation is made from a single plant, it is called *simple*; but if from more than one, *compound*.

SYSTOLE. The contraction of the heart.

TABES. A wasting of the body; attended with hectic fever. It has three species. 1. *Tubespurulenta*, from an ulcerous discharge. 2. *Tabesscrofulosa*, from a scrophulous habit. 3. *Tabesvenenata*, from poison.

TÆNIA. The tape-worm. Characterized by a long, flat, and jointed body. There are two species:—1. The long tape-worm, and the *soleum* of authors, which is peculiar to this country, Russia, France, &c. 2. The broad tape-worm, which is peculiar to the inhabitants of Switzerland, &c.

TARANTULA. A kind of venomous spider, whose bite is said to be cured by music.

TASTE. The sensation by which we perceive the taste of

sapid bodies. The organ of taste is the nervous papillæ, which are situated at the apex and sides of the tongue.

TEETH. The teeth are small bones fixed in the alveoli or sockets of the upper and under jaw. In the adult they are thirty-two in number, sixteen in the upper, and sixteen in the lower jaw, and are distinguished by anatomists into the *incisores*, *cuspidati*, and *molares*. The *incisores*, so called from their cutting the food, are situated in the front of the mouth, four in each jaw: the *cuspidati*, so termed from their shape, and known also by the name of canine teeth, are four in number, one on each side of the incisors. The remaining teeth are called *molares* or grinders, from their action of dividing the food like mill-stones: the last grinder in each jaw is called *dens sapientiæ*, because it appears when the person is supposed to have arrived at years of wisdom. Each tooth is divided into a *crown*, which appears in the mouth above the gum, a *neck* or circle, between the crown and root, and embraced by the gum; and a *fang* or *root*, which is the part hidden within the socket. In each tooth there is a foramen (a hole,) which begins at the extremity of the fang, leading to a small cavity in the internal substance of the tooth, which conveys the nerve, artery, and vein of the tooth and the internal periosteum. The substance of each tooth is of two kinds; viz. bony and vitreous. The vitreous substance, or *enamel*, covers the crown of the tooth, and supplies the place of an external periosteum. The teeth generally appear about the sixth or seventh month after birth, first the incisors, then the cuspidati, and last of all the molares. This first dentition distinguishes them into *primary*, *shedding*, *temporary*, or *milk teeth*. About the seventh year they gradually become loose, and fall out, and are succeeded by large ones, which are called *secondary* or *perennial*, because they usually remain the rest of one's life.—Directions, &c. for the preservation of the teeth, will be given in Part II. of this Compendium.

TEETHING. Dentition. The eruption of the teeth through the gums.

TEMPERAMENTUM. The peculiar constitution of the humours. Temperaments have been variously distinguished: the division most generally received is into the sanguineous, phlegmatic, choleric, and melancholic.

TEMPLE. The lateral and flat parts of the head above the ears.

TENDON. The white and glistening extremity of a muscle.

TENESMUS. A continual inclination to go to stool without a discharge.

TERMINTHUS. Black and ardent pustules, mostly attacking the legs of females.

TETANUS. Spasm with rigidity.

TETTERS. See herpes.

THIRST. The seat of this sensation appears to be either in the fauces or the stomach.

THORACIC DUCT. The trunk of all the absorbents.

THORAX. The chest. That part of the body situated between the neck and the abdomen.

THROMBUS. A small tumour which sometimes arises after bleeding, from the blood escaping from the vein into the cellular structure surrounding it.

TINEA CAPITIS. The scald-head; characterized by small ulcers at the root of the hairs of the head, which produce a friable white crust.

TONICS. Medicines which increase the tone of the muscular fibre; such as stimulants, &c.

TONIC SPASM. A rigid contraction of the muscles, without relaxation, as in trismus, tetanus, &c.

TONSILS. Two oblong, sub-oval glands, situated one on each side of the fauces, and opening into the cavity of the mouth by twelve or more large excretory ducts.

TOPHUS. A small swelling of a bone.

TORMINA. Gripes. Pains in the bowels.

TORPOR. A numbness or deficient sensation.

TOUCH. The organ of touch is formed of the nervous papillæ, which are situated all over the skin, but more especially at the points of the fingers.

TRACHEA. The windpipe.

TRANSPIRATION. See Perspiration.

TRAUMATIC. Any thing relating to a wound.

TRISMUS. Locked jaw.

TUMORES. Tumours; partial swellings without inflammation.

TUNIC. A membrane or covering, as the coats of the eyes.

TUSSIS. A cough. A sonorous concussion of the breast, produced by the violent, and for the most part, involuntary motion of the muscles of respiration. It is symptomatic of many diseases.

TYMPANITES. Tympany. An elastic distention of the abdomen not readily yielding to pressure, and sounding like a drum, with costiveness and atrophy, but no fluctuation. Species: 1. *Tympanites intestinales*, a lodgment of wind in the intestines, known by the discharge of wind giving relief. 2. *Tympanites abdominalis*, when the wind is in the cavity of the abdomen.

TYPHUS. A species of continued fever.

TYRIASIS. A species of leprosy, in which the skin may be easily withdrawn from the flesh.

- ULCER.** A purulent solution of continuity of the soft parts of an animal body.
- UMBILICAL CORD.** The navel string.
- UMBILICAL REGION.** The part about two inches all round the navel.
- URTICARIA.** The nettle rash.
- UVULA.** The small conical fleshy substance hanging in the middle of the *velum pendulum palati*, over the root of the tongue.
- VALVES.** Thin and transparent membranes, situated within certain vessels, as arterics, veins, and absorbents, whose office appears to be to prevent the contents of the vessel from flowing back.
- VALVULA.** A little valve.
- VARICELLA.** The chicken pox.
- VARIOLA.** The small pox.
- VARIOLÆ VACCINE.** The cow pox.
- VARIX.** A dilatation of a vein.
- VEINS.** Long membranous canals, which continually become wider, do not pulsate, and return the blood from the arteries to the heart.
- VELUM PENDULUM PALATI.** The soft part of the palate, which forms two arches, affixed laterally to the tongue and pharynx.
- VENTRICLES.** A term given by anatomists to the cavities of the brain and heart.
- VERMIFUGES.** See anthelmintics.
- VERTEBRÆ.** The bones of the spine are so called.
- VERTEX.** The crown of the head.
- VERTIGO.** Giddiness; mostly symptomatic.
- VESICA.** A bladder.
- VESSICCA FELLIS.** The gall bladder.
- VESICATORIES.** See epispastics.
- VESICULÆ PULMONALES.** The air-cells which compose the greater part of the lungs.
- VIBICES.** The large purple spots which appear under the skin in certain malignant fevers.
- VILLI.** Those delicate fibres situated on the internal surface of the intestines, and other parts of the body.
- VIRUS.** See contagion.
- Vis.** A power.
- Vis VITÆ.** Is used to signify the joint action of all the parts of a human body, but when any thing proves too hard to be conquered by this vis, a disease ensues.
- Vis MEDICATRIX NATURÆ.** A term also employed by physicians, and is synonymous with *Vis Vitæ*.

VISCUS. Any organ or part which has an appropriate use, as the viscera of the abdomen, &c.

VISION. See sight.

VITAL FUNCTIONS. Vital actions. Those actions of the body upon which life immediately depends, as the circulation of the blood, respiration, heat of the body, &c. See function.

VITREOUS HUMOUR. The pellucid body which fills the whole bulb of the eye behind the *crystalline lens*, (the use of the crystalline lens is to transmit and refract the focus of the rays of light to the vitreous humour.) The whole of the vitreous substance is composed of small cells which communicate with each other, and are distended with a transparent fluid.

WATER, Common. Good water is as transparent as crystal, and entirely colourless. It has no smell, and scarcely any taste; and in general the lighter it is, so much the better. Where water cannot be obtained pure, it may be deprived of its pernicious qualities by boiling and filtering, but most effectually by distillation. Any putrid substances in the water may be corrected by the addition of an acid. Thus half an ounce of *alum* in powder will make twelve gallons of corrupted water pure and transparent in two hours, without imparting a sensible degree of astringency. *Charcoal powder* has also been found of great efficacy in checking the putrid tendency of water. To the same purpose *vinegar* and other strong *acids* are well adapted. One hundred parts of water are found to consist of eighty-five parts of oxygen, and fifteen of hydrogen, with a certain portion of caloric. It may appear needless to observe, how much the purity of waters is conducive to health; and how greatly, though by insensible degrees, the human body must necessarily be affected, by minute quantities of insalubrious matters in this universal diluent, and vehicle of all our aliment. For a particular account of the medicinal uses, &c. of common and other waters, see page 289, and seq.

WATER, Distilled. Water is never found pure in a state of nature; and as it is absolutely necessary, particularly for many chemical operations, that it should be perfectly so, we must separate it from all heterogeneous matters by distillation. The first portion that comes over should be thrown away, not so much from the possibility of its being impregnated with volatile matters contained in the water, as from the probability that it will be contaminated with impurities it may have contracted in its passage through the worm in the refrigeratory. The distillation is not to be

pushed too far, lest the water should acquire an empyreumatic flavour.

WATERS, Mineral. *Aquæ minerales. Aquæ medicinales.*
Waters which contain minerals in solution are distinguished by the appellation of mineral waters; but as there is no water found in nature, even among those reckoned the purest, which is not impregnated with some of these substances, the name of mineral waters ought to be confined to such as are sufficiently impregnated to produce a sensible effect on the animal economy. For this reason the name of *medicinal* waters would be much more applicable. The following is the most approved account of the contents and medical qualities of the principal mineral waters, as yet known:

1. *Simpler cold waters.*

MALVERN WATER. The contents of Malvern Holywell are some carbonic acid, a very small portion of earth, either lime or magnesia, united with the carbonic and marine acids; perhaps a little neutral alkaline salt, and a very large proportion of water. Malvern water is principally employed *externally* in scrophulous inflammations of the eyes, and all cutaneous eruptions; *internally* it is prescribed in painful affections of the kidneys and bladder, attended with bloody, purulent, or fetid urine, irritating sores of the surface, and fistulas of long standing. Holywell water in the county of Flint possesses similar virtues.

2. *Simpler thermal waters.*

The **BRISTOL HOT-WELL**, as its name imports, is a thermal spring of very moderate heat at about 74° . A Winchester gallon of this water contains only $47\frac{3}{4}$ grains of solid contents, of which rather less than half are neutral salts with the basis of soda, and the remainder are calcareous salts: it also holds in solution about 1-7th to 1-8th of its bulk of a gas which is chiefly carbonic acid. Bristol Hotwell has obtained great celebrity in the cure of a number of diseases of very opposite natures: in several disorders of the alimentary canal, in the dyspeptic symptoms which so often impair the health of the European who has long resided in hot climates, in bilious diarrhœa, and slight dysentery; also in the cure of diabetes, or at least in affording it considerable relief. But the high reputation which this spring has acquired is above all in alleviating some of the most harassing symptoms of pulmonary consumption. The Sion spring at Clifton near Bristol resembles the Hotwell, except that it is one or two degrees colder.

MATLOCK WATER is found to contain a small quantity of a neutral salt, probably muriat of soda, and about as much.

of an earthy salt, which is chiefly calcareous. No traces of iron are discoverable by any test, nor does there appear to be any excess of carbonic acid, as in the Bristol Hotwell. It may be employed in all those cases where a pure diluent drink is advisable; but it is principally used as a tepid bath, or at least one that comes to the extreme limits of a cold bath.

BUXTON WATER contains little solid matter, and such only as is found in every common spring. It holds in solution, however, a small quantity of azotic gas, as this air is very imperfectly soluble in water. In this respect only does the chemical analysis of Buxton exhibit any thing different from the pump water in common use. The cases most relieved by Buxton water, used externally, are the chronic rheumatism in all its forms succeeding to the acute, and where the inflammation has been chiefly seated in moving parts. Its internal use is found of much service in a number of symptoms of defective digestion and derangement of the alimentary organs, consequent to a life of high indulgence and intemperance, in painful complaints of the kidneys and bladder connected with the formation of calculus. Buxton has been much recommended in various cases of gout, especially where the high inflammation of particular limbs has gone off, and where it has left either a number of dyspeptic symptoms, or a rigidity or impaired action in the seat of the disease. The use of this water is to be avoided in all cases of active inflammation, more especially those of the young and plethoric, where there is naturally a strong tendency to a determination to the lungs.

BATH WATER. Chemical analysis shows that it contains a good deal of calcareous salts, which render it hard and unfit for domestic purposes; that it holds in solution but little, if any neutral alkaline salts, and therefore is scarcely saline; that it is in a very slight degree impregnated with carbonic acid; in a still slighter with iron, and, as it should appear, only when hot from the spring; and that it holds suspended a small portion of siliceous earth. The diseases for which these celebrated waters are resorted to are very numerous; in most of them the bath is used along with the waters as an internal medicine. The general indications for the use of this medicinal water are in cases where a gentle stimulus is required. The cases to which it is more particularly suited, are mostly of the chronic kind. This water is recommended in chlorosis, in complicated diseases brought on by a long residence in hot climates, affecting the secretion of the bile, the functions of the stomach and alimentary canal, in dyspepsia from a long course of high and intemperate living; in jaundice, gout, rheumatism unattended with inflammation, and

several other disorders which give rise to many varieties of paralysis.

3. *Simple saline waters*, containing chiefly neutral purging salts. The following come under this head :—

The *SEDLITZ* or *Seydschutz Water*. From chemical analysis it appears, that this water is strongly impregnated with vitriolated magnesia or Epsom salt, and it is to this, along with probably the small quantity of muriat of magnesia, that it owes its bitter and saline taste, and its purgative properties. The diseases in which this water is recommended are, eructities of the stomach, hypochondriasis, amenorrhœa, and the anomalous complaints succeeding the cessation of the catamenia, œdematous tumours of the legs in literary men, hæmorrhoidal habits, and in scorbutic eruptions.

EPSOM WATER. This water evaporated to dryness leaves a residuum, the quantity of which has been estimated from an ounce and a half in the gallon to five drachms and one scruple. Of the total residuum, by far the greater part, about four or five sixths, is sulphate of magnesia mixed with a very few muriats, such as that of lime, and probably magnesia, which render it very deliquescent, and increase the bitterness of taste, till purified by repeated crystallizations. There is nothing sulphureous or metallie ever found in this spring. The diseases in which it is employed are similar to those of Sedlitz water.

There are many other of the simple saline springs that might be enumerated, all of which agree with that of Epsom in containing a notable proportion of some purging salt. This, for the most part, is either Epsom or Glauber's salt, or often a mixture of both, such as Aeton, Kilburne, Bagnigge Wells, Dog and Duck, St. George's-Fields, &c.

SEA WATER. The chemical analysis of sea water gives a proportion of 1 of saline contents to about $23\frac{1}{4}$ of water; but on our shores it is not greater than 1 of salt to about 30 of water. Sea water on the British coast may, therefore, be calculated to contain in the wine pint, of muriated soda 186,5 grains, of muriated magnesia 51, of selenite 6 grains: total $243\frac{1}{2}$ grains, or half an ounce and $3\frac{1}{2}$ grains of saline contents. The disorders for which the internal use of sea water has been and may be resorted to, are in general the same for which all the simple saline waters may be used, as above.

The peculiar power of sea water and sea salt as a disuentient, employed either internally or externally in serophulous habits, is well known, and is attended with considerable advantage when judiciously applied.

SELTZER WATER is a saline water slightly alkaline, highly acidulated with carbonic acid, containing more of this volatile

principle than is sufficient to saturate the alkali, and the earths which it holds in solution. It is particularly serviceable in relieving some of the symptoms that indicate a morbid affection of the lungs; in slow hectic fever, exanthematous eruptions of the skin, foulness of the stomach, bilious vomiting, acidity and heartburn, spasmodic pains in any part of the alimentary canal, and bloody or highly offensive stools. On account of its property in relieving spasmodic pains, and from its rapid determination to the kidneys, and perhaps its alkaline contents, it has been sometimes employed with great advantage in diseases of the urinary organs, especially those that are attended with the formation of calculus. A large proportion of the Seltzer water, either genuine or artificial, that is consumed in this country, is for the relief of these disorders. The usual dose is from half a pint to a pint.

4. *Chalybeate waters* are those waters which are strongly impregnated with iron: as,

TUNBRIDGE WATER. The analysis of this spring shows it to be a very pure water, as to the quantity of solid matter; and the saline contents (the iron excepted) are such as may be found in almost any water that is used as common drink. It is only as a chalybeate, and in the quantity of carbonic acid, that it differs from common water. Of this acid it contains 1-22d of its bulk. The general operation of these chalybeate waters is to increase the power of the secretory system in a gradual, uniform manner, and to impart tone and strength to all the functions. It is recommended in a variety of complaints incident to the female sex, in menorrhagia, fluor albus, chlorosis, &c.

SPA WATER appears to be a very strongly acidulous chalybeate, containing more iron, and more carbonic acid, than any of the foregoing. What applies to the use of chalybeates will apply to this water.

PYRMONT WATER. A general view of the analysis of this water will show, that it stands the first in rank of the highly carbonated chalybeates, and contains such an abundance of carbonic acid, as not only to hold dissolved a number of carbonic salts, but to show all the properties of this acid uncombined, and in its most active form. Pyrmont water is likewise a strong chalybeate, with regard to the proportion of iron; and it is besides a very hard water, containing much selenite and earthy carbonates. The diseases to which this mineral water may be advantageously applied, are the same as those for which the Spa and others of the acidulated chalybeates are resorted to, that is, in all cases of debility that require an active tonic that is not permanently heating; for various disorders in the alimentary canal, especially bilious

vomiting, and diarrhœa, and complaints that originate from obstructed menstruation.

CHELTHENHAM WATER. It is decidedly saline : by far the greater part of the salts are of a purgative kind. It is also one of the strongest chalybeates. The iron is suspended entirely by the carbonic acid, of which gas the water contains about an eighth of its bulk ; but from the abundance of earthy carbonates and oxyd of iron, not much of it is uncombined. Cheltenham water is used with considerable benefit in a number of diseases, especially of the chronic kind, and many of them highly difficult of cure ; in glandular obstructions, and particularly those of the liver and the other organs connected with the functions of the alimentary canal, and in scorbutic eruptions of the skin.

SCARBOROUGH WATER. There are two species of chalybeate water found in this spot, and they differ considerably in their composition, though they rise nearly contiguous to each other. The one is a simple carbonated chalybeate, similar to the Tunbridge water ; the other, which is better known and more frequented, and more particularly distinguished as Scarborough water, has, in conjunction with the iron, a considerable admixture of a purging salt, which adds much to its value. The diseases in which it is ordered are similar to those in which Cheltenham water is prescribed, only it is necessary to increase the purgative effect of this water by adding similar salts. It is therefore chiefly as an alterative that this water can be employed in its natural state.

HARTFELL WATER has been found of service in disorders of the stomach and bowels, bloody flux, bloody urine, immoderate flow of the menses, or their suppression, fluor albus, gleet, &c. It is also applied externally to old and languid ulcers.

Sulphureous waters are those which are strongly impregnated with sulphur united either to hydrogen, or to an alkali, or to both.

HARROGATE WATER is a cold sulphureous water, considerably compound in its constitution, containing about a twelfth of its bulk of hepatic gas, and a number of purgative salts, which in most persons produce a very sensible determination to the bowels. It is used in obstinate costive habits that accompany hypochondriasis, in scrophula, and particularly in cutaneous diseases, elephantiasis, lepra, and also in hæmorrhoids ; in the cure of the round worm and ascarides, when taken in such a dose as to prove a brisk purgative.

MOFFAT WATER is a cold sulphureous water of very simple composition, exhibited in cutaneous eruptions of every kind, scrophula, ill-conditioned and irritable sores, and in bilious and calculous complaints.

AIX-LA-CHAPELLE or AKEN WATER. The most striking feature in this mineral water, and almost peculiar to it, is the unusual quantity of sulphur that it contains; the whole, however, is so far united to a gaseous basis as to be entirely volatile by heat, so that none is left in the residuum after evaporation. These thermal waters are much resorted to on the continent for a variety of complaints. They are found essentially serviceable in the numerous symptoms of disorders of the stomach and biliary organs, that follow a life of high indulgence in the luxuries of the table; in nephritic cases, stiffness and rigidity of joints and ligaments from rheumatism or gout; in palsy, and in the distressing debility which follows a long course of mercury and excessive salivation.

BAREGE WATER is also reckoned among the hot sulphureous waters.—(*Hooper's Medical Dictionary.*)

Mineral waters are distinguished by the peculiar substance which predominate in each. Accordingly, they have been divided into four classes, namely:—

- | | |
|-----------------------|--------------------|
| 1. <i>Acidulous,</i> | 3. <i>Hepatic,</i> |
| 2. <i>Chalybeate,</i> | 4. <i>Saline.</i> |

1. The acidulous waters contain a considerable proportion of carbonic acid. They are easily known by their acid taste, and by their sparkling like champagne wine when poured into a glass. They contain almost constantly some common salt, and in general also a greater or smaller proportion of the earthy carbonates.

2. The chalybeate waters contain a portion of iron, and are easily distinguished by the property which they have of striking a black with the tincture of nut galls.

3. The hepatic or sulphureous waters are those which contain sulphureted hydrogen gas, (*see hepatic air.*) These waters are easily distinguished by the odour of sulphurated hydrogen gas which they exhale, and by the property which they have of blackening silver and lead.

4. Saline waters are those which contain only salts in solution, without iron or carbonic acid in excess; and these have again been distinguished or divided into four different orders. The waters belonging to the first order contain salts whose base is lime. They are known by the name of hard waters, and have but a slight disagreeable taste. The waters belonging to the second order are those in which common salt predominates. The waters of the third order contain sulphate of magnesia. They have a bitter taste, and are purgative. Finally, the waters of the fourth order are alkaline, containing carbonate

of soda. They are easily distinguished by the property which they have of tinging vegetable blues green.

Chaptal observes, that the composition or perfect imitation of mineral waters is no longer a problem insoluble to chemists. What, in fact, is a mineral water? It is rain water, which, filtering through the mountains, becomes impregnated with the various soluble principles it meets with. Why, therefore, when once we know the nature of these principles, can it not be possible to dissolve them in common water, and to do that which nature itself does? Nature is inimitable only in its vital operations; we may imitate its effects perfectly in all other processes: we may even do better; for we can at pleasure vary the temperature and the proportions of the constituent parts. The machine of Nouth, improved by Parker, or rather that invented by Dr. Woulfe, may be made use of to compose any gaseous mineral water, whether acidulous or hepatic; and nothing is more easy than to imitate such waters as contain only fixed principles.

XERASIA. An excessive tenuity of the hairs, similar to down.

XIPHOID. A term given by anatomists to parts which had some resemblance to an ancient sword, as the xiphoid or ensiform cartilage, attached to the end of the sternum or breast bone.

YAWS. The African name for raspberry. The yaws are said to be so common on the coast of Guinea and other parts of Africa, that it seldom fails to attack each individual of both sexes, one time or other, in the course of their lives; but most commonly during childhood or youth. The following account of the yaws may not be unimportant: it is taken from the sixth volume of the Edinburgh Medical Essays, (article 76). It makes its appearance in little spots on the cuticle, level with the skin, at first no larger than a pin's head, which increase daily, and become protuberant like pimples: soon after the cuticle frets off, and then, instead of finding pus or ichor in this small tumour, only white sloughs or sordes appear, under which is a small red fungus, growing out of the cutis, increasing gradually to very different magnitudes, some less than the smallest wood strawberry, some as large as a raspberry, and others exceeding in size even the largest mulberries; which berries they very much resemble, being knobbed as they are. There is always one excrescence, or yaw, of an uncommon size, longer in falling off than the others, and which is considered as the master yaw, and so termed.

Dr. Ludford imagines the yaws as being in every instance the consequence of contagion. He considers no peculiar predisposition from diet, colour, or other circumstances, as being in any degree necessary. He views the disease as chiefly arising from contact with the matter, in consequence of sleeping in the same bed, washing in the same vessel with the infected, or the like. In short, the yaws may be communicated by any kind of contact; nay, it is even believed that *flies often convey the infection*, when, after having gorged themselves with the virulent matter by sucking the ulcers of those who are diseased, they make punctures in the skin of such as are sound, and thus inoculate them.

The yaws are not considered as dangerous, if the cure be skilfully managed at a proper time; but if the patient has been prematurely salivated, or has taken any quantity of mercury, and his skin being suddenly cleared thereby, the cure will be very difficult, if not impracticable. Directions for the cure of this extraordinary disease, will be given in the second part of the Compendium.

ZONA. The shingles.

ZOOLOGY. That part of natural history which treats of animals.

ZOONOMIA. The laws of organic life.-



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ERRATA.

Page 32, line 17 from the bottom ; for *spirit of sal ammoniac*,
read *compound spirit of sal ammoniac*, or
ammonia.

64, 16 from the top ; for *brush*, read *brash*.
120, 11 from the top ; for *directs*, read *direct*.
128, 6 from the bottom ; for *electuary of catechu*,
 read *compound electuary of catechu*.
199, 7 from the bottom ; for *mixed with the lead*,
 read *mixed with the spirit*.

NOTE.—The greater part of the above Errata was corrected
in an early stage of the impression.

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EXTRACTS AND ESSENCES

OF

British and Foreign Plants, &c.

EXTRACT of BURDOCK—recommended as a purifier of the blood and humours; particularly useful in rheumatic, gouty, and other chronic af-

fections; its operation, as a diuretic, is mild, and it increases insensible perspiration.

DOSE: From half a drachm to a drachm and a half, twice a day. Dissolved in warm water, and taken in any agreeable liquid.

EXTRACT OF SARSAPARILLA.—**DOSE, &c.** the same as burdock.

EXTRACT OF JUNIPER BERRIES is valuable as a carminative, detergent, and diuretic medicine; it may be used with advantage in cases where more stimulating preparations would be improper; as in catarrhs, debilities of the stomach and intestines, and difficulties of the urinary excretions, especially in persons advanced in life.

Occasionally may be taken with it an aromatic; such as sweet fennel or caraway-seeds, which renders it very agreeable, and assists it in stomach cases. **DOSE,** as above.

EXTRACT OF WHITE POPPY HEADS possesses all the good properties of opium, without occasioning those ill effects which foreign opium is apt to produce.

DOSE: from three to six grains.

Four grains of the soft extract, is equivalent to one grain of foreign opium.

EXTRACT OF DANDELION.—Boerhaave and other celebrated physicians had a high opinion of this, and all other lactescent plants; and esteemed them capable, if duly continued, of resolving very

obstinate coagulations, and obstructions of the viscera. The more immediate sensible operation of dandelion, is to loosen the belly and promote the urinary discharge, without producing preternatural heat.

Many eminent authors affirm, that dandelion joined with sorrel, and taken in whey, (cream of tartar being added occasionally,) has succeeded in the stone and gravel, and in resolving obstructions in the liver, &c. It is therefore presumed that the extract of dandelion may be useful in *tropical climates*.

DOSE, &c. the same as burdock..

EXTRACT OF GROUND-IVY, or GILL, is useful in disorders of the breast; for cleansing and healing ulcerations in general, and for resolving coagulated juices, and purifying the blood. It was formerly the custom to macerate this herb in malt liquor, which it remarkably helps to fine down. Both the extract and essence of ground-ivy are recommended to the consumptive, to be taken in milk.

DOSE, &c. the same as above.

At the ELABORATORY, several other *Extracts and Essences of British Plants* are prepared; and in these ready forms, it is presumed many valuable though neglected medicines, which *our own island supplies*, might be more generally introduced.

They are peculiarly well adapted to preserve the medicine in foreign climates, to obviate the

too frequent use of spirituous tinctures, &c. which are, in many cases, but *elegant poisons*; yet, watery infusions or decoctions, cannot by the debilitated stomach be borne for a length of time, or in quantities sufficient to produce the desired intentions. Thus, then, medicines of *real efficacy*, and probably more congenial to *our own constitutions*, may be conveyed with the happiest effect, to some distant wanderer from his native home, and who might anxiously wish to possess or make trial of the product of his native soil, when all medical means near at hand had failed.

These extracts are sold in pots of different sizes, with directions.

COX'S CHARCOAL DENTIFRICE.

THE various claims on public favour, for a preference in the preparation of charcoal as a dentifrice, induce D. Cox to make known, that his prepared charcoal was offered to the public in the year 1799, after the preparation had been honoured with the approbation of Sir Walter Farquhar, Bart. and other eminent physicians. It likewise appeared in his directions for medicine chests, and also in the several former editions of the Family Medical Compendium.

N. B. D. Cox employs no *Traveller*; but all orders (post-paid,) addressed to the Elaboratory, Gloucester; or to Mr. Smyth, Perfumer to his Majesty, New Bond-street, London, will be punctually attended to. Bottles (in cases) of charcoal dentifrice for exportation.

SILVER WIRED
AND OTHER APPROVED TOOTH BRUSHES.

MISCELLANEOUS ARTICLES.—Swiss arquebussade, Hungary water, Smyth's lavender, and other odoriferous waters; *Soda*, Cheltenham, &c. mineral waters and Salts; Dr. Pearson's tasteless purging salt; Eau de Luce; aromatic spirit of vinegar; vinegarettes; *real* odour of roses; pomade divine, &c. &c.

Calcined magnesia; castor oil (cold drawn); Dr. Boswell's elegant female medicine; and all other medicines of respectable and established reputation.

Medical prescriptions, accurately and neatly dispensed.

MEDICINE CHESTS, CLOSETS, CASES, and DISPENSARIES, of every description; completely furnished or fitted up, in the highest perfection.

* * * *It is respectfully requested, that Orders, may be accompanied with Cash Bills; the balance of which, will be returned with the goods, or sent in other articles.*

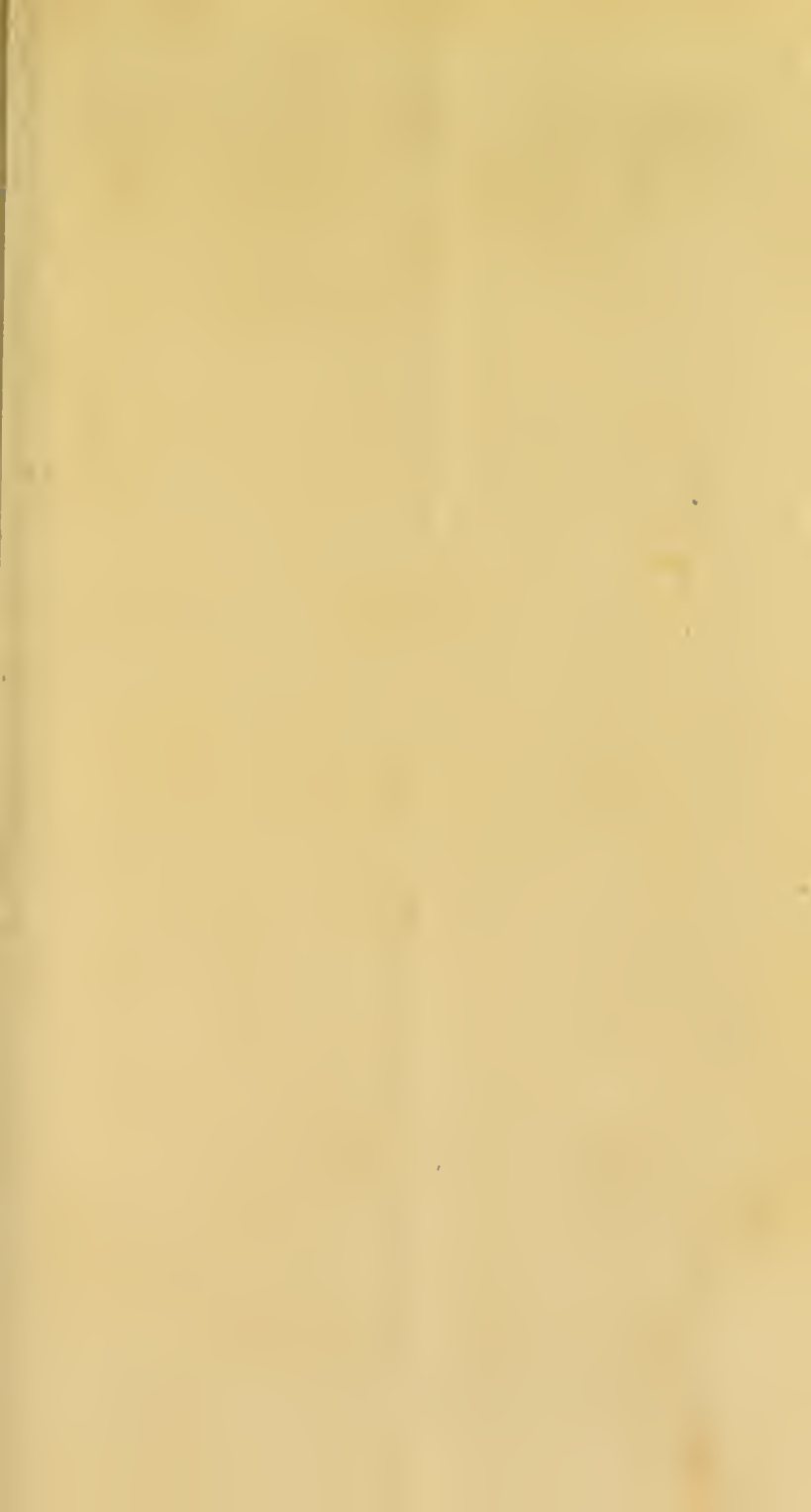
This request, Mr. Cox earnestly hopes, will not appear disrespectful, as he wishes sedulously to devote his whole time to the preparations, from which he has derived some share of celebrity, and the most liberal encouragement.

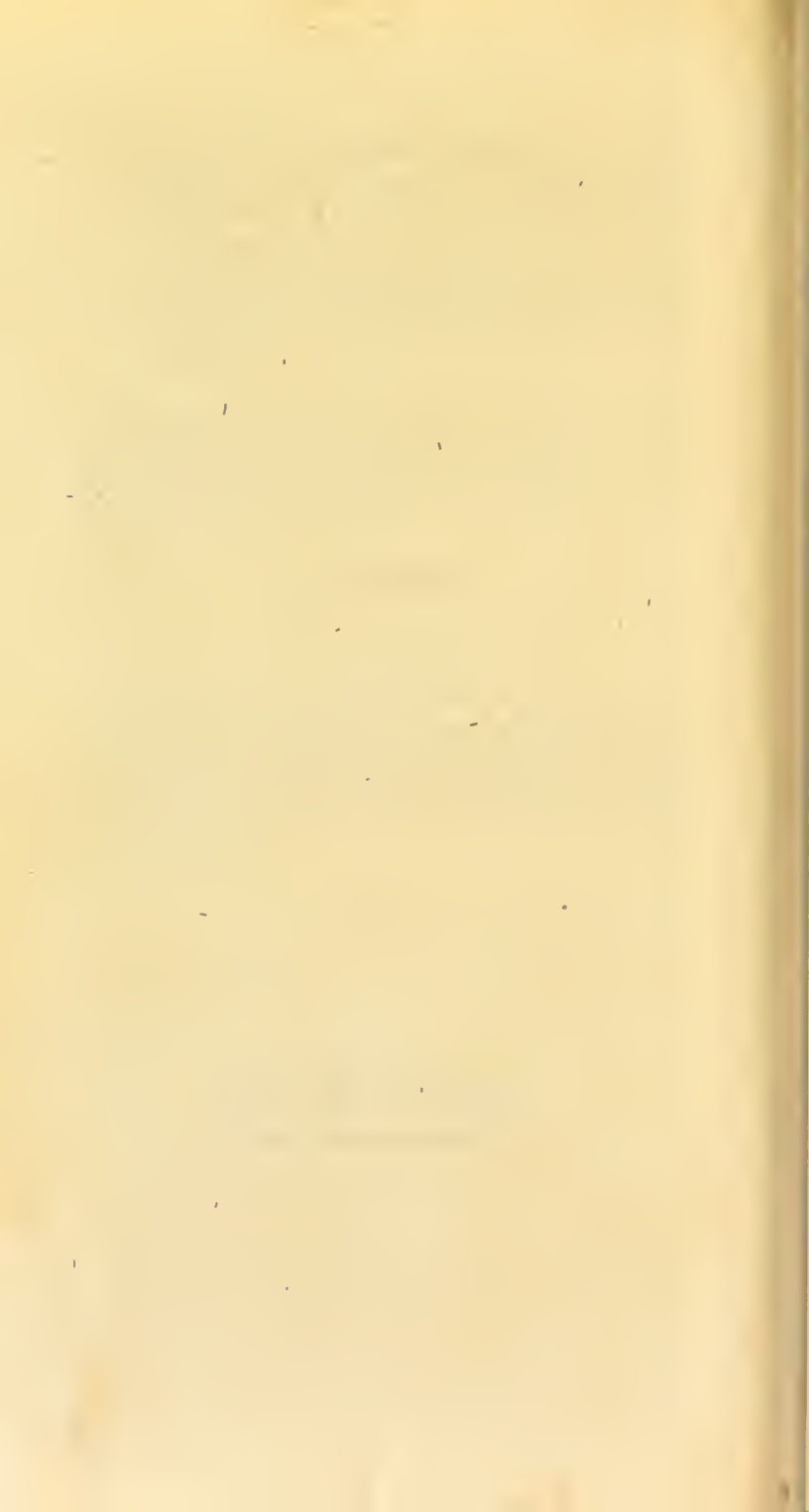
All articles and preparations, made and sold at the ROYAL ELABORATORY, GLOCESTER, are signed or sealed, "D. COX."

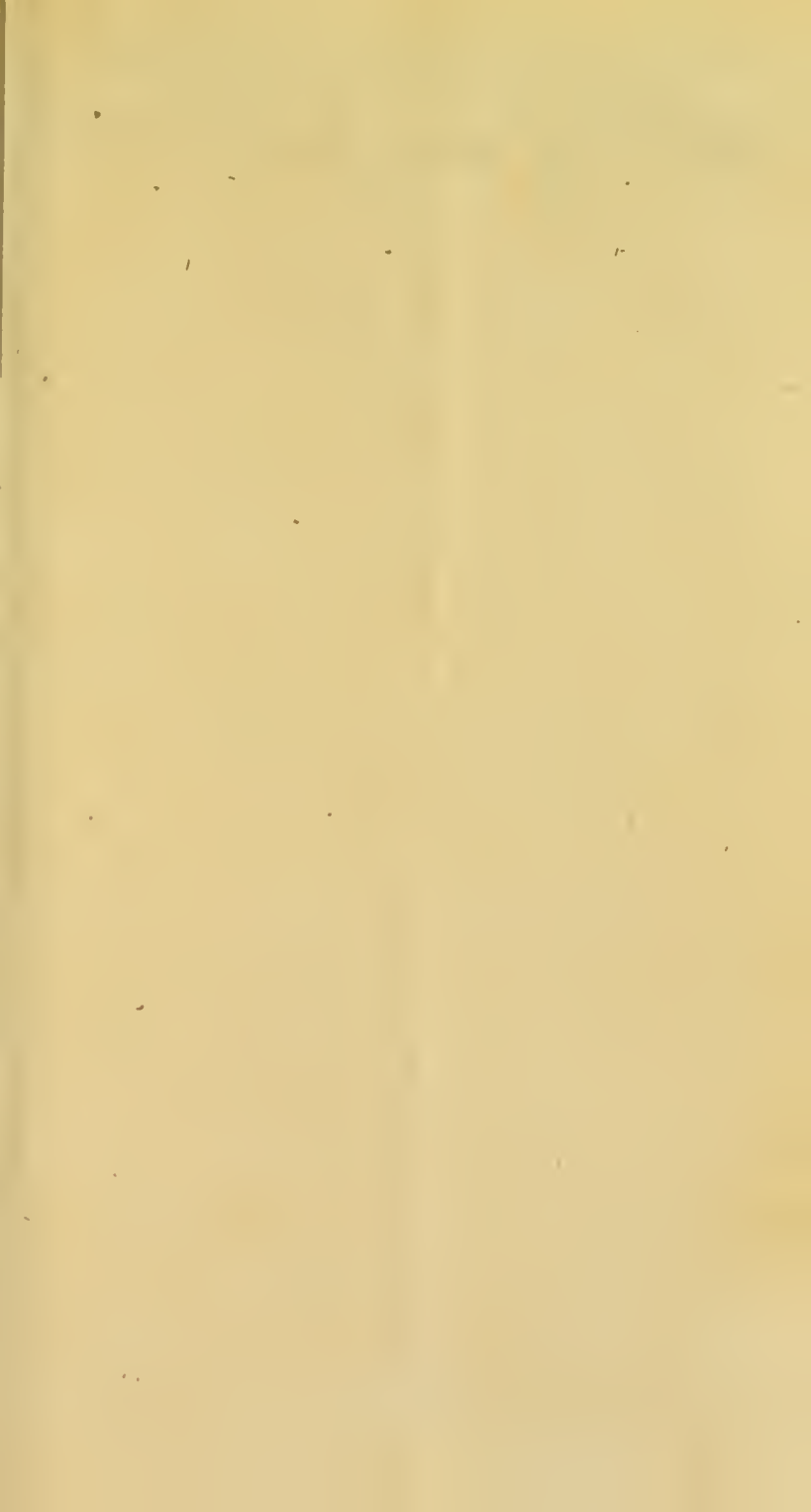
A CARD.

IT having been reported that D. C. confines his attention to chemistry alone, he begs leave to contradict so prejudicial a statement, by informing the public, that he continues the practice of medicine as usual.

Printed by Jos. Harris, Gloucester.









Shoe juice white on linen
Horse radish good for sores

